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THE CANADA YEAR BOOK

1922-23

OFFICIAL STATISTICAL ANNUAL OF THE RESOURCES, HISTORY, INSTITUTIONS AND SOCIAL AND ECONOMIC CONDITIONS OF THE DOMINION

Published by Authority of

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MINISTER OF TRADE AND COMMERCE

OTTAWA

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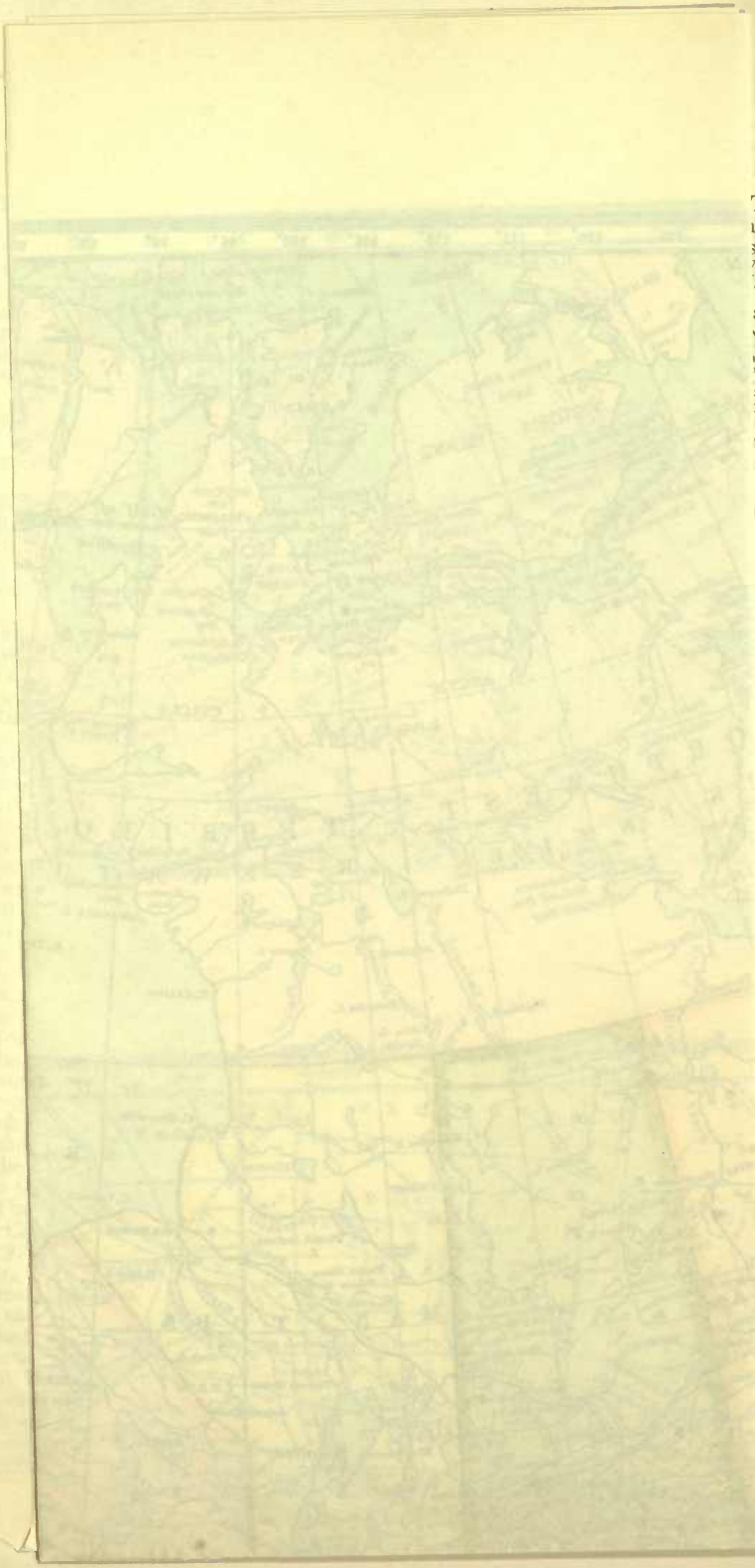

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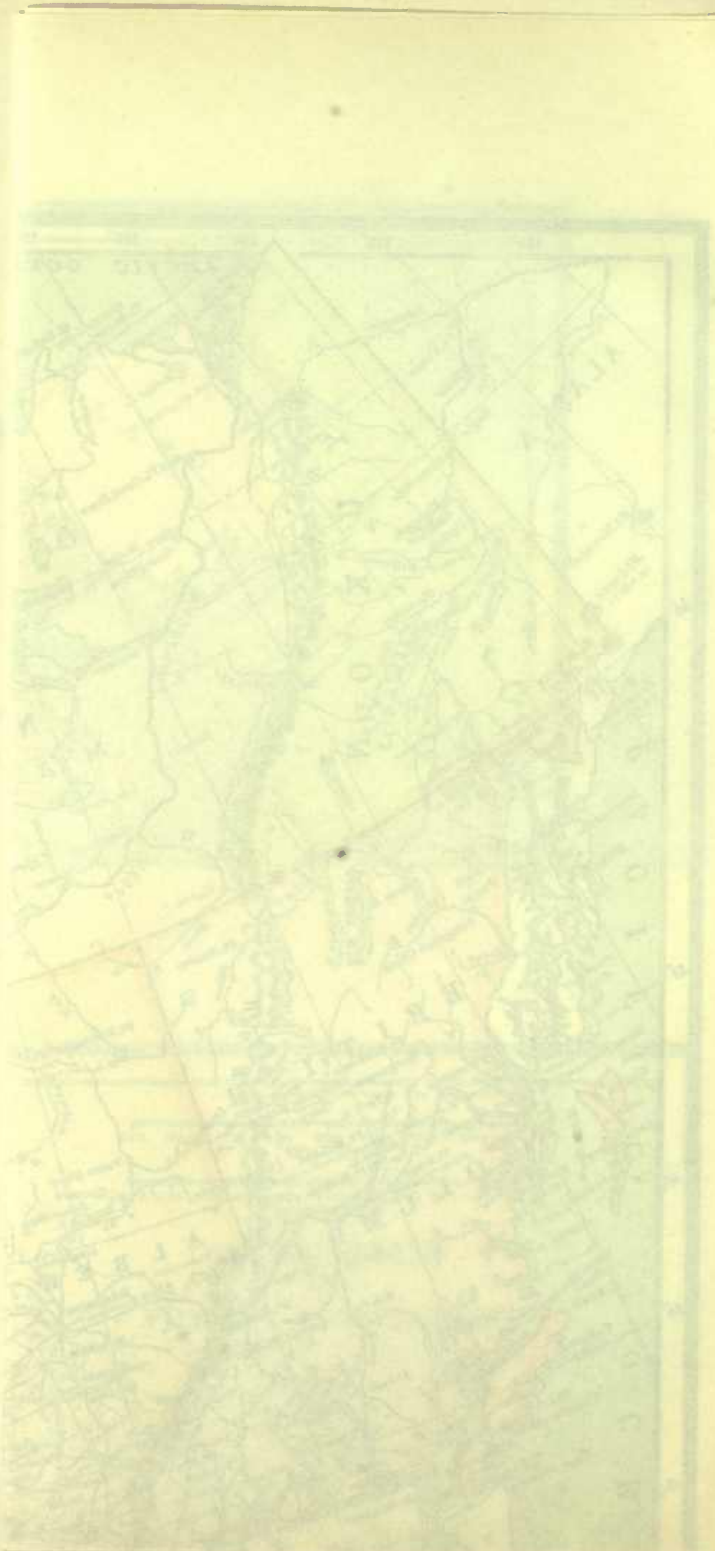

PREFACE.

The Canada Year Book had its origin in the first year of the Dominion. The want of a publication that would assemble in conveniently accessible and summary form the chief comparative statistics of Canada, together with the necessary descriptive matter, was felt immediately after Confederation, when the "Year Book and Almanac of British North America," being, (to quote its sub-title), "an Annual Register of political, vital and trade statistics, customs tariff, excise and stamp duties, and public events of interest in Upper and Lower Canada, New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland and the West Indies," was founded. Subsequently the title was altered to that of "The Year Book and Almanac of Canada,—an annual statistical abstract of the Dominion, and a Register of legislation and of public men in British North America." The work was edited by Mr. Arthur Harvey, F.S.S., of the Department of Finance, but was in no sense a government publication. It was published annually from 1867 to 1879.

In 1886, after the passing of a General Statistics Act, the "Statistical Abstract and Record of Canada" was instituted as an official book of reference respecting the institutions, population, finance, trade, and general conditions of the Dominion, "with comparative data for the United Kingdom, British Possessions and foreign countries." The work was prepared in the General Statistical Office of the Department of Agriculture, and was continued annually until 1904 under the direction of Dr. George Johnson, F.S.S. In 1905, the General Statistical Office was amalgamated with the Census Office (which was at the same time made a permanent organization), the Year Book being remodelled by the late Dr. Archibald Blue, Chief Officer, and continued under the title "The Canada Year Book, Second Series."

In the reorganization and centralization of statistics which followed the Report of the Commission on Statistics of 1912, and the establishment of the Dominion Bureau of Statistics in 1918, the continuous improvement of the Year Book, both in content and method of presentation, was made a primary object. A fundamental purpose of statistical organization is the securing of an *aperçu* or conspectus of the country as an entity, especially as regards its manifold social and economic activities, which are thus viewed both in their totality and in their relations to each other. In addition, therefore, to the branches of the Bureau which deal with specific subjects, such as population, agriculture, mining, trade, education, etc., etc., and which work in collaboration with the various Dominion and Provincial Departments having jurisdiction in corresponding fields, there was created a "General Statistics Branch" whose functions are: (*a*) the carrying on of subsidiary inquiries on a great variety of subjects of less extent and complexity than those assigned to special branches in the Bureau, but essential to a complete and rounded scheme; (*b*) the synthesizing of general statistics and the interpretation of the general economic trend; (*c*) the preparation of digests and abstracts of statistics relating to group phenomena; and (*d*) the bringing of Canadian statistics as a whole into relation with British Empire and world statistics, under the necessary reservations suggested by differing political and economic systems in the different nations. In these multifarious activities, the Branch builds upon the inter-departmental organizations completed by the other branches of the Bureau (which provide for a pooling of data as between the Bureau and the various executive Departments, Dominion and Provincial), but also supplements these materials with descriptive and other data drawn from a wide field.

The most important publication of the General Statistics Branch of the Bureau is the Canada Year Book, which is a compendium of official data on the physiography, history, institutions, population, production, industry, trade, transportation, finance, labour, administration, and general social and economic conditions and life of the Dominion—the whole conceived from the widest point of view and presenting the more salient statistics of the country against a background of interpretative matter designed to bring out their significance. It will be appreciated that a work of this character is dependent upon completion of the basic organization of statistics, and that it has been necessary therefore to develop the Year Book gradually, as the improved materials under the Bureau became available.

With the present edition of the Year Book, the Bureau has entered upon the final stages of its revision of this important publication. The changes that have

been made in recent years have been described in the preface for each edition. The present is marked by the omission of any leading topical article, effort having been concentrated during the past year on the general improvement of the several sections and their arrangement in logical form and sequence. Especially thorough has been the revision of the sections on population and on the different phases of production.

Among other features of the edition to which the special attention of the reader may be directed are: the contributions by Sir Frederick Stupart, Director of the Meteorological Service of Canada, on the factors which control Canadian weather and on the development of the Meteorological Service; the expanded treatment of parliamentary representation in Canada and of provincial governments and ministries; the summary of the principal data collected at the census of 1921 and the first detailed treatment of vital statistics; the addition to the production section of a general survey of production and of a sub-section on construction, and the development of the other sub-sections under this heading; the more adequate treatment of internal trade; the insertion of sub-sections on roads and highways and on aerial navigation in the transportation and communications section; the publication of the Bureau's new index number of wholesale prices and of its statistics of retail prices; the introduction into the finance section of a discussion of national wealth and national income; the adding to the administration section of an entirely new sub-section on "public health and public benevolence," also of a select bibliography of leading books relating to Canadian history.

Throughout the volume, the latest available information is included in each section, the tables in many cases including figures for the fiscal year 1922-23, and the letter-press supplying supplementary figures extending in some cases to the end of the calendar year 1923.

The present edition of the Year Book has been edited by Mr. S. A. Cudmore, B.A. (Tor.), M.A., (Oxon.), F.S.S., F.R. Econ. Soc. Grateful acknowledgments are hereby tendered to the numerous officials of the Dominion and Provincial Governments who have generously assisted in the collection of information. The tables have in the main been compiled, as for many years, by Messrs. Jas. Ekead and Jos. Wilkins, while most of the diagrams have been drawn by Mr. R. E. Watts.

R. H. COATS,
Dominion Statistician.

Dominion Bureau of Statistics,
Ottawa, Dec. 31, 1923.

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STATISTICAL SUMMARY OF THE PROGRESS OF CANADA.

Area of the Dominion of Canada in square miles:—Land, 3,603,909; Water, 125,756; Total, 3,729,665.

	Items.		1871.	1881.	1891.	1896.	1901.
1	Estimated population	No.	3,689,287	4,324,810	4,833,239	5,086,000	5,371,315
2	Immigration	No.	27,773	47,991	82,165	16,835	49,149
	Agriculture[1]—						
3	Wheat	acres	1,646,781	2,363,554	2,701,213	–	4,224,542
		bush.	16,723,873	32,350,269	42,223,372	–	55,572,368
		$	16,993,265	38,820,323	31,667,529	–	36,122,039
4	Oats	acres	–	–	3,961,356	–	5,367,655
		bush.	42,489,453	70,493,131	83,428,202	–	151,497,407
		$	15,966,310	23,967,655	31,702,717	–	51,509,118
5	Barley	acres	–	–	868,464	–	871,800
		bush.	11,496,038	16,844,868	17,222,795	–	22,224,366
		$	8,170,735	11,791,408	8,611,397	–	8,889,746
6	Corn	acres	–	–	195,101	–	360,758
		bush.	3,803,836	9,025,142	10,711,380	–	25,875,919
		$	2,883,145	5,415,085	5,034,348	–	11,902,923
7	Potatoes	acres	403,102	464,289	450,190	–	448,743
		bush.	47,330,187	55,268,227	53,490,857	–	55,362,635
		$	15,211,774	13,288,510	21,396,342	–	13,842,658
8	Hay and Clover	acres	3,650,419	4,458,349	5,931,548	–	6,543,423
		tons	3,818,641	5,055,810	7,693,733	–	7,852,731
		$	38,869,900	49,446,480	69,243,597	–	85,625,315
	Field Crops—						
	Total Area	Acres	–	–	–	–	–
		$	–	–	–	–	**194,953,420**
	Live Stock—						
9	Horses	No.	836,743	1,059,358	1,470,572	–	1,577,493
		$	–	–	–	–	118,279,419
10	Milch Cows	No.	1,251,209	1,595,800	1,857,112	–	2,408,677
		$	–	–	–	–	69,237,970
11	Other Cattle	No.	1,373,081	1,919,189	2,263,474	–	3,167,174
		$	–	–	–	–	54,197,341
12	Sheep	No.	3,155,509	3,048,678	2,562,781	–	2,510,239
		$	–	–	–	–	10,490,594
13	Swine	No.	1,366,083	1,207,619	1,733,850	–	2,353,828
		$	–	–	–	–	16,445,702
	Total value	$	–	–	–	–	**268,651,026**
	Dairying—						
14	Cheese, factory	lb.	–	–	–	–	220,833,469
		$	1,601,738	5,464,454	9,784,288	–	22,221,430
15	Butter, creamery	lb.	–	–	–	–	36,066,739
		$	–	341,478	913,591	–	7,240,972
16	Miscellaneous dairy products	$	–	–	–	–	269,520
	Total value of dairy products	$	–	–	–	–	**29,731,922**
	Fisheries—						
	Total value	$	**7,573,199**	**15,817,162**[2]	**18,877,874**	**20,407,424**	**25,737,153**
	Minerals—						
17	Gold	oz.	105,187	63,524	45,018	133,262	1,167,216
		$	2,174,412	1,313,153	930,614	2,754,774	24,128,503
18	Silver	oz.	–	355,083[3]	414,523	3,205,343	5,539,192
		$	–	347,271[2]	409,549	2,149,503	3,265,354
19	Copper	lb.	–	3,260,424[2]	9,529,401	9,393,012	37,827,019
		$	–	366,798[2]	1,226,703	1,021,960	6,096,581
20	Lead	lb.	–	204,800[2]	88,665	24,199,977	51,900,958
		$	–	9,216[2]	3,857	71,159	2,249,387
21	Nickel	lb.	–	839,477	4,035,347	3,397,113	9,189,047
		$	–	498,286	2,421,208	1,188,990	4,594,523
22	Pig iron	tons	–	94,827[2]	23,891	67,268	274,376
		$	–	3[illegible]6,192[2]	3[illegible]8,901	924,129	3,512,923
23	Coal	tons	1,063,742[3]	1,537,106	3,577,749	3,745,716	6,486,325
		$	1,763,423[3]	2,688,621	7,019,425	7,226,462	12,699,243
24	Cement	brl.	–	69,843[2]	93,479	149,090	450,394
		$	–	81,909[2]	108,561	201,651	660,030
	Total value	$	–	**10,221,255**[4]	**18,976,616**	**22,474,256**	**65,797,911**

[1] The figures of field crops (1871–1911), are for the preceding years. [2] 1887. [3] 1874. [4] 1886.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA.

Area of the Dominion of Canada in square miles:—Land, 3,603,969; Water, 125,776; Total, 3,729,665.

1906.	1911.	1916.	1919.	1920.	1921.	1922.	1923.[1]	
6,171,000	7,206,643	8,035,584	8,478,546	8,631,475	8,788,483	8,966,834	9,146,456	1
189,064	311,084	48,537	57,702	117,336	148,477	89,999	72,887	2
–	8,864,154	15,369,709	19,125,968	18,232,374	23,261,224	22,422,693	22,671,864	3
–	132,077,547	262,781,000	193,260,400	263,189,300	300,858,100	399,786,400	474,199,000	
–	104,816,825	344,096,400	457,722,000	427,357,300	242,936,000	339,419,000	316,606,700	
–	8,656,179	10,996,487	14,952,114	15,849,928	16,949,029	14,541,229	13,727,067	4
–	245,393,425	410,211,000	394,387,000	530,709,700	426,232,900	491,239,000	537,733,300	
–	86,796,130	210,957,500	317,097,000	280,115,400	146,395,300	185,455,000	177,704,400	
–	1,283,094	1,802,996	2,645,509	2,551,919	2,795,665	2,529,520	2,784,571	5
–	28,848,310	42,770,000	56,389,400	63,310,550	59,709,100	71,865,300	76,997,800	
–	14,653,697	35,024,000	69,330,300	52,821,400	28,254,150	33,335,300	32,055,700	
–	293,951	173,000	264,607	291,650	296,866	318,397	317,729	6
–	14,417,599	6,282,000	16,940,500	14,334,800	14,904,000	13,798,000	13,608,000	
–	5,774,039	6,747,000	22,080,000	16,593,400	12,317,000	11,509,700	12,466,000	
–	464,504	472,992	818,767	784,544	701,912	683,594	560,942	7
–	55,461,478	63,297,000	75,344,940[3]	80,298,840[3]	64,407,600[3]	55,745,300[3]	56,460,000[3]	
–	27,426,765	50,982,300	118,894,200	129,803,300	82,147,600	50,320,000	57,076,800	
–	8,289,407	7,821,257	10,595,383	10,379,292	10,614,951	10,001,667	9,725,602	8
–	10,406,367	14,527,000	16,348,000	13,338,700	11,366,100	14,488,200	14,844,900	
–	90,115,531	168,547,900	338,713,200	348,166,200	267,764,200	194,950,000	162,882,000	
–	–	**38,930,333**	**53,049,640**	**52,830,865**	**59,635,346**	**57,189,681**	**56,569,794**	
–	**384,513,795**	**886,494,900**	**1,537,170,100**	**1,455,244,050**	**931,863,670**	**962,293,200**	**891,755,200**	
–	2,598,958	3,246,430	3,667,369	3,400,352	3,813,921	3,648,871	3,530,641	9
–	381,915,505	418,686,000	435,070,000	361,328,000	314,764,000	264,043,000	223,154,000	
–	2,595,255	2,835,532	3,548,437	3,530,238	3,736,832	3,745,804	3,659,365	10
–	109,575,926	198,896,000	327,814,000	281,675,000	190,157,000	179,141,000	173,015,000	
–	3,930,828	3,763,155	6,536,574	5,947,142	6,469,373	5,974,065	5,586,866	11
–	86,278,490	204,477,000	381,007,000	279,825,100	183,649,000	156,441,000	143,458,000	
–	2,174,300	2,025,030	3,421,958	3,720,783	3,675,860	3,263,525	2,753,860	12
–	10,701,691	20,927,000	50,402,000	37,263,000	23,308,000	24,962,000	21,321,000	
–	3,634,778	3,484,982	4,040,070	3,516,678	3,904,895	3,915,684	4,405,316	13
–	26,986,621	60,700,000	102,309,000	81,155,000	54,842,000	57,300,000	52,312,000	
–	**615,457,833**	**903,686,000**	**1,296,602,000**	**1,041,246,000**	**766,720,000**	**681,887,000**	**613,260,000**	
204,788,583	199,904,205	192,968,597	166,421,871	149,201,856	162,117,494	135,821,116	–	14
23,597,639	21,587,124	35,512,622	44,586,168	39,100,872	28,710,030	21,824,760	–	
45,930,294	64,698,165	82,564,130	103,899,707	111,691,718	128,744,610	152,501,900	–	15
10,949,062	15,645,845	20,966,355	56,371,985	63,625,203	48,135,439	53,453,282	–	
910,842	1,814,871	–	34,238,449	43,610,416	35,078,548	29,694,004	–	16
35,457,543	**39,047,840**	–	**135,196,602**	**146,336,491**	**111,924,017**	**104,972,046**	–	
26,279,485	**34,667,872**	**35,860,708**	**58,508,479**[2]	**49,241,339**[2]	**34,931,935**[2]	**41,800,210**[2]	–	
556,415	473,159	930,492	766,764	765,007	926,329	1,263,364	1,179,500	17
11,502,120	9,781,077	19,234,976	15,853,478	15,814,098	19,148,920	26,116,050	24,382,000	
8,473,379	32,559,044	25,459,741	16,020,657	13,330,357	13,543,198	18,581,439	18,864,000	18
5,659,455	17,355,272	16,717,121	17,802,474	13,450,330	8,485,355	12,576,758	10,944,000	
55,609,888	55,648,011	117,150,028	75,053,581	81,600,691	47,620,820	42,879,818	86,312,000	19
10,720,474	6,886,998	31,867,150	14,028,265	14,244,217	5,953,555	5,738,177	12,515,000	
54,608,217	23,784,969	41,497,615	43,827,699	35,953,717	66,679,592	93,307,171	112,600,000	20
3,089,187	827,717	3,532,692	3,053,037	3,214,262	3,828,742	5,817,702	7,882,000	
21,490,955	34,098,744	82,958,564	44,544,883	61,335,706	19,293,060	17,597,123	61,444,000	21
8,948,834	10,229,623	29,035,498	17,817,953	24,534,282	6,752,571	6,158,993	18,433,000	
598,411	917,535	1,169,257	917,781	1,090,396	665,676	428,923	880,018	22
7,955,136	12,307,125	16,750,898	24,577,589	30,319,024	17,307,576	8,819,242	–	
9,762,601	11,323,388	14,483,395	13,681,218	16,631,954	15,057,495	15,157,431	17,132,536	23
19,732,019	26,467,646	38,817,481	54,413,349	80,693,723	72,451,656	65,518,497	74,269,000	
2,128,374	5,692,915	5,369,560	4,495,257	6,651,980	5,752,885	6,943,372	7,652,000	24
3,170,859	7,644,537	6,547,728	9,802,433	14,798,070	14,195,143	15,438,481	14,291,000	
79,286,697	**103,220,994**	**177,201,534**	**176,686,390**	**277,859,665**	**171,923,342**	**184,297,242**	**214,102,000**	

[1] The figures for 1923 are subject to revision. [2] Calendar years. [3] Cwt.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued.

	Items.		1871.	1881.	1891.	1896.	1901.
	Manufactures[1]—						
1	Employees	No.	187,942	254,894	272,033	–	339,173
2	Capital	$	77,964,020	164,957,423	353,213,000	–	445,916,487
3	Salaries and wages	$	40,851,009	59,401,702	79,234,311	–	113,249,350
4	Products	$	221,617,773	309,731,867	368,696,723	–	481,053,375
	Trade—						
5	Exports[2]	$	57,630,024	83,944,701	88,671,738	109,707,805	177,431,386
6	Imports[3]	$	84,214,388	90,488,329	111,533,954	105,361,161	177,930,919
	Total	$	**141,844,412**	**174,433,030**	**200,205,692**	**215,068,966**	**355,362,305**
	Exports, domestic—						
7	Wheat	bush.	1,748,977	2,523,673	2,108,216	9,919,542	9,739,758
		$	1,981,917	2,593,820	1,583,084	5,771,521	6,871,939
8	Wheat flour	brl.	306,339	439,728	296,784	186,710	1,118,700
		$	1,609,849	2,173,108	1,388,578	718,433	4,015,226
9	Oats	bush.	542,386	2,926,532	260,560	968,130	8,155,063
		$	231,227	1,791,873	129,917	273,861	2,490,521
10	Hay	tons	23,487	168,381	65,083	214,640	252,977
		$	290,217	1,813,208	559,489	1,976,431	2,097,882
11	Bacon and hams, shoulders and sides	cwt.	103,444	103,547	75,541	537,361	1,055,495
		$	1,018,918	758,334	628,469	4,381,968	11,778,446
12	Butter	lb.	15,439,266	17,649,491	3,768,101	5,889,241	16,335,528
		$	3,065,234	3,573,034	602,175	1,052,089	3,295,663
13	Cheese	lb.	8,271,439	49,255,523	106,202,140	164,689,123	195,926,697
		$	1,109,906	5,510,443	9,508,800	13,956,571	20,696,951
14	Gold[4]	$	163,037	767,318	554,126	1,099,053	24,445,156
15	Silver	oz.	–	–	–	2,508,233	4,022,019
		$	595,261	34,494	238,367	1,595,548	2,420,750
16	Copper[5]	lb.	6,246,000	39,604,000	10,994,498	3,575,482	26,345,776
		$	120,121	150,412	505,196	194,771	2,659,261
17	Nickel	lb.	–	–	5,352,043	6,996,540	9,537,558
		$	–	–	240,499	486,651	958,365
18	Coal	tons	318,287	420,055	833,684	1,025,060	1,888,538
		$	662,451	1,123,091	2,916,465	3,249,069	5,307,060
19	Vegetable products (except chemicals, fibres and wood)	$	–	–	13,742,557	14,606,735	25,541,567
20	Animals and their products (except chemicals and fibres)	$	–	–	36,399,140	48,763,906	68,465,332
21	Fibres, textiles and textile products	$	–	–	872,628	2,104,013	1,880,539
22	Wood, wood products and paper	$	–	–	25,351,085	28,772,187	33,099,915
23	Iron and its products	$	–	–	556,527	1,188,254	3,778,897
24	Non-ferrous metals and their products	$	–	–	1,618,955	3,843,475	33,395,096
25	Non-metallic minerals and their products	$	–	–	3,988,584	4,368,013	7,356,324
26	Chemicals and allied products	$	–	–	851,211	481,661	791,975
27	All other commodities	$	–	–	5,291,051	5,579,561	3,121,741
	Total exports, domestic	$	**57,630,024**	**83,944,701**	**88,671,738**	**109,707,805**	**177,431,386**
	Imports for consumption—						
28	Vegetable products (except chemicals, fibres and wood)	$	–	–	24,212,140	22,742,835	38,036,757
29	Animals and their products (except chemicals and fibres)	$	–	–	8,080,862	7,599,802	14,022,896
30	Fibres, textiles and textile products	$	–	–	28,670,141	27,421,519	37,284,752
31	Wood, wood products and paper	$	–	–	5,203,490	4,787,288	8,196,901
32	Iron and its products	$	–	–	15,142,615	13,393,762	29,955,936
33	Non-ferrous metals and their products	$	–	–	3,810,626	2,967,439	7,159,142
34	Non-metallic minerals and their products (except chemicals)	$	–	–	14,139,024	13,736,879	21,255,403
35	Chemicals and allied products	$	–	–	3,697,810	3,840,806	5,692,564
36	All other commodities	$	–	–	8,577,246	8,870,831	16,326,568
	Total imports	$	**84,214,388**	**90,488,329**	**111,533,954**	**105,361,161**	**177,930,919**
	Steam Railways—						
37	Miles in operation	No.	2,695	7,331	13,838	16,270	18,140
38	Capital	$	257,035,188[6]	284,419,293	632,061,440	697,212,941	816,110,837
39	Passengers	No.	5,190,416[7]	6,943,671	13,222,568	13,059,023	18,385,722
40	Freight	tons	5,670,836[7]	12,065,323	21,753,021	24,248,294	36,999,371
41	Earnings	$	19,470,539[7]	27,987,509	48,192,099	50,374,295	72,898,749
42	Expenses	$	15,775,532[7]	20,121,418	34,960,449	34,893,337	50,368,726

[1] The statistics of manufactures in 1871, 1881, 1919, 1920 and 1921, include works employing fewer than five hands, while those of 1891, 1901 and 1911 are for works employing five hands and over, except in the case of butter and cheese factories, flour and grist mills, electric light plants, lumber, lath and

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued.

1906.	1911.	1916.	1919.	1920.	1921.	1922.	1923.[8]	
383,920	515,203	–	682,483	685,349	517,141	–	–	1
833,916,155	1,247,583,609	–	3,230,686,368	3,443,276,053	3,210,709,288	–	–	2
162,155,578	241,008,416	–	689,435,709	816,055,139	581,402,385	–	–	3
706,446,578	1,165,975,639	–	3,520,731,589	4,024,739,463	2,747,926,675	–	–	4
235,483,956	274,316,553	741,610,638	1,216,443,806	1,239,492,098	1,189,163,701	740,240,680	931,451,443	5
283,740,280	452,724,603	508,201,134	919,711,705	1,064,528,123	1,240,158,882	747,804,332	802,465,043	6
519,224,236	**727,041,156**	**1,249,811,772**	**2,136,155,511**	**2,304,020,221**	**2,429,322,583**	**1,488,045,012**	**1,733,916,486**	
40,399,402	45,802,115	157,745,469	41,808,897	77,978,037	129,215,157	136,489,238	215,074,566	7
33,658,391	45,521,134	172,896,445	96,985,056	185,044,806	310,952,138	179,990,730	252,145,805	
1,532,014	3,049,046	6,400,214	9,205,439	8,863,068	6,017,032	7,414,282	10,227,060	8
6,179,825	13,854,790	35,767,044	99,931,659	94,262,928	66,520,490	53,478,150	60,075,426	
2,700,303	5,431,662	26,816,322	17,879,783	10,768,872	14,321,048	36,195,127	29,022,347	9
1,083,347	2,144,846	14,637,849	15,193,527	9,349,455	14,152,033	18,717,105	14,533,015	
206,714	326,132	255,407	492,208	218,561	179,398	31,287	58,300	10
1,529,941	2,723,291	5,849,426	7,666,491	4,087,670	4,210,594	650,379	927,143	
1,029,079	598,745	1,536,517	1,246,888	2,236,426	982,338	992,080	1,015,901	11
12,086,868	8,526,332	27,090,113	40,242,175	70,123,580	31,492,407	23,012,480	22,536,397	
34,031,525	3,142,682	3,441,183	13,659,157	17,612,605	9,739,414	8,430,591	21,994,578	12
7,075,539	744,288	1,018,769	6,140,864	9,844,359	5,128,831	3,224,390	8,243,138	
215,834,543	181,895,724	168,961,583	152,207,037	126,395,777	133,620,340	133,849,800	114,549,900	13
24,433,169	20,739,507	26,690,500	35,223,983	36,336,863	37,146,722	25,440,322	20,828,234	
12,991,916	5,344,465	16,870,394	9,202,033	5,974,334	3,038,779	2,532,050	5,449,469	14
7,261,527	33,731,010	27,794,566	19,759,478	12,379,642	13,331,050	13,601,420	17,111,416	
4,310,528	17,269,168	14,298,351	19,519,642	14,255,601	11,127,432	8,711,304	11,458,992	15
44,282,348	55,005,342	111,046,300	65,612,400	42,003,300	36,167,900	10,333,900	21,451,300	16
7,148,633	5,575,033	14,670,073	8,684,191	5,253,218	4,336,972	1,029,417	2,035,511	
23,959,841	34,767,523	70,443,000	79,164,400	44,140,700	47,018,300	10,904,700	42,628,500	17
2,166,936	3,842,332	7,714,769	11,170,359	9,039,221	9,405,291	2,689,702	8,880,641	
1,820,511	2,315,171	1,971,124	1,8[illegible],639	2,120,138	2,277,202	1,953,053	2,089,438	18
4,643,198	6,014,095	6,032,765	10,169,722	13,183,666	16,501,478	13,182,440	12,956,615	
55,828,252	84,556,886	257,249,193	288,893,218	416,122,771	482,924,672	317,578,963	407,760,092	19
84,570,644	69,693,263	138,375,083	244,990,826	314,017,944	188,359,937	135,798,720	135,841,642	20
2,602,903	1,818,931	15,097,691	28,030,381	34,028,314	18,783,884	4,585,987	7,850,843	21
45,716,762	56,334,695	83,116,282	154,569,154	213,913,944	284,561,478	179,925,887	228,756,205	22
4,705,296	9,884,346	66,127,099	81,910,926	81,785,829	76,500,741	28,312,272	51,137,912	23
28,455,786	34,000,996	66,036,542	79,260,732	54,976,413	45,939,377	27,885,996	44,358,037	24
7,817,475	10,038,493	11,879,741	26,662,304	30,342,926	40,121,892	22,616,684	27,646,704	25
1,784,800	2,900,379	15,948,480	56,799,799	22,581,049	19,582,051	9,506,170	14,046,940	26
4,002,038	5,088,564	87,780,527	255,326,466	71,722,908	32,389,669	14,030,001	14,053,068	27
235,483,956	**274,316,553**	**741,610,638**	**1,216,443,806**	**1,239,492,098**	**1,189,163,701**	**740,240 680**	**931,451,443**	
50,330,667	79,214,342	95,426,024	157,506,654	242,075,389	261,081,364	172,665,523	161,669,784	28
23,616,835	30,671,908	38,657,514	41,503,094	95,098,743	61,722,390	46,645,789	46,736,774	29
59,292,868	87,916,282	96,191,485	178,190,241	231,559,877	243,608,342	139,997,137	170,146,958	30
14,341,947	26,851,936	18,277,420	35,399,852	43,183,267	57,449,384	35,791,487	35,845,544	31
49,436,840	91,968,180	92,065,895	192,527,377	186,319,876	245,625,703	110,210,539	138,724,455	32
17,527,922	27,655,874	29,448,661	41,649,431	52,103,913	55,553,902	29,773,413	37,492,604	33
33,757,284	53,335,826	53,427,531	135,250,417	121,956,176	206,095,113	137,604,140	139,919,012	34
8,251,378	12,489,776	19,258,326	34,282,647	29,886,102	36,334,612	24,630,333	25,793,101	35
27,184,539	42,620,479	65,448,278	103,399,992	62,344,780	72,688,072	50,485,971	46,136,811	36
283,740,280	**452,724,603**	**508,201,134**	**919,711,705**	**1,064,528,123**	**1,240,158,882**	**747,804,332**	**802,465,043**	
21,353	25,400	37,434	38,896	39,384	39,771	39,773	–	37
1,063,881,629	1,528,689,201	1,893,125,774	2,036,165,606	2,170,030,128	2,164,687,636	2,159,277,131	–	38
27,989,782	37,097,718	43,503,459	43,754,194	51,318,422	46,793,251	44,383,620	–	39
57,966,713	79,884,282	109,659,088	116,699,572	127,429,154	103,131,132	108,530,518	–	40
125,322,865	188,733,494	261,888,654	382,976,901	492,101,104	458,008,891	440,687,128	–	41
87,129,434	131,034,785	180,542,259	341,866,509	478,248,154	422,581,205	393,927,406	–	42

shingle mills, lime kilns, brick and tile works and fish canneries. [2]Exports of domestic merchandise only. [3] Imports of merchandise for home consumption. [4] The figures for 1919 are for gold exported to foreign countries only. [5] Copper, fine, contained in ore, matte, regulus, etc. [6] Year 1876. [7] Year 1875. [8]The figures for 1923 are subject to revision.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—concluded.

	Items.		1871.	1881.	1891.	1896.	1901.
	Electric Railways[1]—						
1	Miles in operation	No.	–	–	–	–	675
2	Capital	$	–	–	–	–	–
3	Passengers	No.	–	–	–	–	120,934,656
4	Freight	tons	–	–	–	–	287,926
5	Earnings	$	–	–	–	–	5,768,283
6	Expenses	$	–	–	–	–	3,435,162
	Canals—						
7	Passengers carried	No.	100,377	118,136	146,336	151,342	190,428
8	Freight	tons	3,955,621	2,853,230	2,902,526	7,991,073	5,665,259
	Shipping (sea-going)—						
9	Entered	tons	2,521,573	4,032,946	5,273,935	5,895,360	7,514,732
10	Cleared	"	2,594,460	4,071,391	5,421,261	5,563,464	7,028,330
	Total	"	5,116,033	8,104,337	10,695,196	11,458,824	14,543,062
11	Telegraphs, Government, miles of line		–	1,947	2,699	2,786	5,744
12	Telegraphs, other, miles of line		–	–	27,866	28,949	30,194
13	Telephones	No.	–	–	–	–	63,192
14	Motor vehicles	"	–	–	–	–	–
	Postal—						
15	Money orders issued	$	4,546,434	7,725,212	12,478,178	13,081,861	17,956,258
16	Revenue	$	803,637	1,344,970	2,515,823	2,971,653	3,421,192
17	Expenditure	$	994,876	1,876,658	3,161,676	3,752,805	3,837,376
	Dominion Finance—						
18	**Revenue**	$	**19,335,561**	**29,635,298**	**38,579,311**	**36,618,591**	**52,514,701**
19	**Expenditure**	$	**15,623,082**	**25,502,554**	**36,343,568**	**36,949,142**	**46,866,368**
20	Gross debt	$	115,492,683	199,861,537	289,899,230	325,717,537	354,732,433
21	Assets	$	37,786,165	44,465,757	52,090,199	67,220,104	86,252,429
	Net debt	$	**77,707,518**	**155,395,780**	**237,809,031**	**258,497,433**	**268,480,004**
	Chartered Banks—						
22	Capital paid up	$	37,095,340	59,534,977	60,700,697	62,043,173	67,035,615
23	Assets	$	125,273,631	200,613,879	269,307,032	320,937,643	531,829,324
24	Liabilities (excluding capital and reserves)	$	80,250,974	127,176,249	187,332,325	232,338,086	420,003,743
25	Deposits[2]	$	56,287,391	94,346,481	148,396,968	193,616,049	349,573,327
	Savings Banks—						
26	Deposits in Post Office	$	2,497,260	6,208,227	21,738,648	28,932,930	39,950,813
27	Government	$	2,072,037	9,628,445	17,661,378	17,866,389	16,098,144
28	Special	$	5,766,712	7,685,888	10,982,232	14,459,833	19,125,097
	Loan Companies[4]—						
29	Assets	$	8,392,464	73,906,638	125,041,146	143,887,377	158,523,307
30	Liabilities	$	8,392,464	71,965,017	123,915,704	143,296,284	158,523,307
31	Deposits	$	2,399,136	13,460,268	18,482,959	19,404,878	20,756 910
	Trust Companies—						
32	Shareholders' assets	$	–	–	–	–	–
33	Investments on trust account	$	–	–	–	–	–
	Dominion Fire Insurance—						
34	Amount at risk, Dec. 31	$	228,453,784	462,210,968	759,602,191	845,574,352	1,038,687,619
35	Premium income for year	$	2,321,716	3,827,116	6,168,716	7,075,850	9,650,348
	Provincial Fire Insurance—						
36	Amount at risk Dec. 31	$	–	–	–	–	–
37	Premium income for year	$	–	–	–	–	–
	Dominion Life Insurance—						
38	Amount at risk Dec. 31	$	45,825,935	103,290,932	261,475,229	327,814,465	463,769,034
39	Premium income for year	$	1,852,974	3,094,689	8,417,702	10,604,577	15,189,854
	Provincial Life Insurance—						
40	Amount at risk Dec. 31	$	–	–	–	–	–
41	Premium income for year	$	–	–	–	–	–
	Education—						
42	Enrolment	No.	–	891,000	995,000	–	1,083,000
43	No. of Teachers	"	13,559	18,016	23,718	–	27,126
44	Total Public Expenditure	$	–	–	–	–	11,044,925

[1] Calendar years 1920–1922. [2] Including amounts deposited elsewhere than in Canada from 1901–1922. [3] Active assets only. [4] Including Building Societies and Trust Companies (1871–1911). [5] Motor vehicles in 6 provinces numbered 2,130 in 1907. [6] The figures for 1923 are subject to revision.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—concluded.

1906.	1911.	1916.	1919.	1920.	1921.	1922.	1923[6].	
814	1,224	1,674	1,696	1,699	1,687	1,724	–	1
–	111,532,347	154,895,584	171,894,556	170,826,404	177,187,436	188,258,974	–	2
237,655,074	426,296,792	580,094,167	686,124,263	804,711,333	719,305,441	738,908,949	–	3
506,024	1,228,362	1,936,674	2,474,892	2,691,150	2,285,886	2,445,425	–	4
10,966,871	20,356,952	27,416,285	35,696,532	47,047,246	44,536,833	49,660,485	–	5
6,675,037	12,096,134	18,099,906	26,839,070	37,242,483	35,945,316	35,986,872	–	6
256,500	304,904	263,648	262,056	230,468	230,129	219,519	220,592	7
10,523,185	38,030,353	23,583,491	9,995,266	8,735,383	9,407,021	10,026,055	11,199,434	8
8,895,353	11,919,339	12,616,927	11,694,613	12,010,374	12,516,503	13,620,183	17,095,883	9
7,948,076	10,377,847	12,210,723	13,566,780	13,234,380	12,400,226	13,974,287	17,182,454	10
16,843,429	22,297,186	**24,827,656**	**25,261,393**	25,244,754	24,916,729	**27,594,470**	**34,278,337**	
6,829	8,446	10,699	11,428	11,454	11,207	11,455	–	11
31,506	33,905	38,552	37,771	40,939	41,577	41,641	–	12
–	302,759	548,421	724,500	856,266	902,090	944,029	–	13
5–	21,519	123,464	341,316	407,064	465,378	513,821	–	14
37,355,673	70,614,862	94,469,871	142,375,809	159,224,937	173,523,322	139,914,186	143,055,120	15
5,993,343	9,146,952	18,858,410	21,602,713	24,449,917	26,331,119	26,554,538	29,262,233	16
4,921,577	7,954,223	16,009,139	19,273,584	20,774,385	24,661,262	28,121,425	27,794,502	17
80,139,360	**117,780,410**	**172,147,838**	**312,946,747**	**349,746,335**	**434,386,537**	**381,952,387**	**391,614,900**	18
67,240,641	**87,774,198**	**130,350,727**	**232,731,283**	**303,843,930**	**361,118,145**	**347,560,691**	**332,293,732**	19
392,269,680	474,941,487	936,987,802	2,460,183,021	3,041,529,587	2,902,482,117	2,902,347,137	2,888,827,237	20
125,226,702	134,899,435	321,831,631	647,598,202[3]	792,660,963[3]	561,603,133[3]	480,211,336[3]	435,050,368[3]	21
267,042,978	**340,042,052**	**615,156,171**	**1,812,584,819**	**2,248,868,624**	**2,340,878,983**	**2,422,135,801**	**2,453,776,869**	
91,035,604	103,009,256	113,175,353	115,004,960	123,617,120	129,096,339	125,456,485	124,373,293	22
878,512,076	1,303,131,260	1,839,286,709	2,754,568,118	3,064,133,843	2,841,782,079	2,638,776,483	2,643,773,986	23
713,790,553	1,097,661,393	1,596,905,337	2,495,582,568	2,784,068,698	2,556,454,190	2,364,822,657	2,436,587,628	24
605,968,513	980,433,788	1,418,035,429	2,189,428,885	2,438,079,792	2,264,586,736	2,120,997,030	2,107,606,111	25
45,736,488	43,330,579	40,008,418	41,654,920	31,605,594	29,010,619	24,837,181	22,357,268	26
16,174,134	14,655,564	13,520,009	11,402,098	10,729,218	10,150,189	9,829,653	9,247,121	27
27,399,194	34,770,386	40,405,037	46,799,877	53,118,053	58,576,775	58,292,920	59,327,961	28
232,076,447	389,701,988	70,872,297	74,520,021	90,413,261	96,698,809	102,493,145	–	29
232,076,447	389,701,988	70,872,297	74,520,021	90,413,261	96,698,809	100,403,652	–	30
23,046,194	33,742,513	8,987,720	9,347,096	15,257,840	15,868,926	16,910,558	–	31
–	–	7,826,943	10,007,941	10,224,252	10,238,236	10,353,243	–	32
–	–	47,669,243	73,133,017	73,704,706	88,036,507	101,078,205	–	33
1,443,902,244	2,279,868,346	3,720,058,236	4,923,024,381	5,969,872,278	6,020,513,832	6,348,637,436	–	34
14,687,963	20,575,255	27,783,852	40,031,474	50,527,937	312,564	48,168,310	–	35
–	–	849,915,678	1,004,942,977	1,054,105,011	1,269,764,435	1,036,200,959	–	36
–	–	3,902,504	4,302,492	5,216,795	5,545,549	4,890,627	–	37
656,260,900	950,220,771	1,422,179,632	2,187,837,317	2,657,095,493	2,934,843,848	3,171,388,996	–	38
22,364,456	31,619,626	48,093,105	74,708,509	90,218,047	99,015,081	107,104,091	–	39
–	–	348,097,229	223,853,792	174,740,215	222,871,178	175,380,201	–	40
–	–	5,311,003	4,407,833	3,282,669	4,389,008	4,329,716	–	41
1,173,009	1,356,879	1,622,351	1,738,977	1,812,618	1,869,643	1,950,000	–	42
32,250	40,516	50,307	53,990	55,733	56,607	59,312	–	43
16,368,244	**37,971,374**	**57,362,734**	**74,843,138**	**76,835,089**	**112,976,543**	**114,711,249**	–	44

NOTE.

In the foregoing Summary the statistics of immigration, fisheries (1871–1916), trade, shipping, the Post Office, the public debt, revenue and expenditure and the Post Office and Government Savings Banks relate to the fiscal years ended June 30 up to 1906, and from that on to the years ended March 31. Agricultural, dairying, fisheries (1918–22), mineral, manufacturing, banking, insurance, loan and trust companies' statistics relate to the calendar years and railway statistics to the years ended June 30, 1871–1919, and to the calendar years 1920–1922. [3] Canal statistics are those of the navigation seasons. The telegraph statistics relate to the fiscal years for Government lines and to the calendar years for other lines.

ERRATA.

P. 5. Table 1. The land and water areas of Saskatchewan are 243,381 and 8,319 sq. miles respectively, instead of 242,808 and 8,892. The corresponding areas of Canada are 3,603,909 and 125,756 instead of 3,603,336 and 126,329, as given in the table.

P. 25. The longitude of Saskatoon seismological station should be 106° 30′ W. instead of 106° 40′ W.

The registration of the Victoria Station should be correct to ± .1 sec. instead of correct to ± 1 sec.

P. 171. Table 30. The urban population of Canada in 1921 should be 4,352,442 instead of 4,352,402.

I.—PHYSICAL CHARACTERISTICS OF CANADA.

I.—GEOGRAPHICAL FEATURES.

1.—General Description.

Situation.—The Dominion of Canada comprises the whole northern half of the North American continent except the United States territory of Alaska, and Labrador, a dependency of the island colony of Newfoundland. It is bounded on the west by the Pacific ocean and Alaska, the boundary with which was in part determined by the award of the Alaska Boundary Tribunal signed at Washington, Oct. 20, 1903; on the south by the 49th parallel, the Great Lakes, the St. Lawrence river and additional lines set out by the Ashburton Treaty, signed Aug. 9, 1842; and on the east by the Atlantic ocean, the gulf of St. Lawrence, the undefined Labrador boundary and Davis strait. Northern boundaries have yet to be fixed by further exploration, but cape Columbia in north latitude 83° 5′ is the most northerly known point of land in the Dominion. The southernmost point is Middle island in lake Erie, in north latitude 41° 41′, while from east to west the Dominion extends from about west longitude 57°—the approximate boundary with Newfoundland—to west longitude 141°, the boundary with Alaska. Canadian territory thus extends over about 84° of longitude and 42° of latitude.

Area.—The area of the Dominion (including an estimate of 500,000 square miles for the provisional district of Franklin) is 3,729,665 square miles, a figure which may be compared with that of 3,743,529 for the United States and its dependent territories, 3,800,000 the total area of Europe, 2,974,581 the total area of Australia, 3,913,560 the total area of China inclusive of dependencies, 3,275,510 the area of Brazil, 1,802,577 the area of India, 121,633 the area of the United Kingdom and 13,419,046, the total area of the British Empire. By comparison with the last two figures Canada is seen to be over 30 times as large as the United Kingdom and to comprise almost 28 p.c. of the total area of the British Empire.

Political Subdivisions.—Canada is divided from east to west into the following provinces:—the Atlantic Maritime provinces of Prince Edward Island, Nova Scotia and New Brunswick, all three comparatively small in area; Quebec, covering a strip south of the St. Lawrence and the whole territory north of the St. Lawrence and east of the Ottawa to Hudson strait; Ontario, extending northward from the Great Lakes to Hudson bay; Manitoba, Saskatchewan and Alberta, the provinces of the interior continental plain, extending from 49° to 60° north latitude; and British Columbia, the province of the western mountain and Pacific coast region, also extending from 49° to 60°. North of the 60th parallel of latitude the country is divided into the Yukon Territory and the Northwest Territories, the latter area composed of the provisional districts of Mackenzie, Keewatin and Franklin. In actual area the three Maritime provinces, covering a total land area of 51,163 square miles, make up but 1·4 p.c. of the total land area of the country. Quebec, the largest in area of all the provinces, and Ontario cover 19·45 and 10·15 p.c. of the country's aggregate land area respectively. The four western provinces, taken in order as one proceeds west, constitute 6·4, 6·7, 7·0 and 9·8 p.c., the Yukon 5·7 p.c., Franklin 13·8 p.c., Keewatin 5·7 p.c. and Mackenzie 13·9 p.c. of the land area of the Dominion. A brief description of each of the provinces is appended.

Prince Edward Island.—This, the smallest province of the Dominion, lies at the south of the gulf of St. Lawrence and is separated from the mainland of the

continent by Northumberland strait. It is 150 miles in length and varies from 4 miles to 30 in width, covering an area of 2,184 square miles, some 200 square miles more than the state of Delaware and slightly more than half the area of the island of Jamaica in the British West Indies. Its rich red soil and red sandstone formations make up a distinctive and even topography, no point in the island attaining a greater altitude than 311 feet above sea level. A climate tempered by the surrounding waters of the gulf and yet free from the rigours of Atlantic storms, combined with numerous rivers, sheltered harbours and rolling plains, offers great inducements to the pursuit of agriculture and of fishing. The province is noted for its predominance in the fox-farming industry, its lobster canneries, and its production of oats and potatoes.

Nova Scotia.—The province of Nova Scotia is 386 miles in length by from 50 to 100 miles in width, a long and rather narrow strip of land lying parallel to the Maine and New Brunswick coast and joined to the latter by the isthmus of Chignecto. It includes at its north the island of Cape Breton, which is separated from the mainland by the strait of Canso. The total area of the province is 21,428 square miles, a little over 2,000 square miles less than the combined area of Belgium and Holland, with which Nova Scotia may very well be compared as to climate, natural resources and accessibility. Cape Breton island, at the mouth of the gulf of St. Lawrence and sheltering Prince Edward Island from the Atlantic, is roughly 100 miles in length with an extreme breadth of 87 miles, its area of 3,120 square miles enclosing the salt water lakes of Bras d'Or, connected with the sea at the north by two natural channels and at the south by the St. Peter's ship canal. The ridge of mountainous country running through the centre of the Nova Scotian mainland divides it roughly into two slopes, that facing the Atlantic being generally rocky, barren and open to the sweep of Atlantic storms, while the other, facing the bay of Fundy and the gulf of St. Lawrence, consists for the most part of arable and fertile plains and river valleys, and is noted for its general farming and fruit farming districts. The Atlantic coast is deeply indented with numerous excellent harbours.

New Brunswick.—With a total area of 27,985 square miles, New Brunswick may be compared to Scotland with its area of 30,405 square miles. The conformation of the province is also rather similar to that of Scotland, for the country, although not mountainous, is diversified by the occurrence of a great number of low hills and valleys. While New Brunswick is essentially a part of the mainland, the bay of Chaleur at the north, the gulf of St. Lawrence and Northumberland strait at the east, the bay of Fundy at the south and Passamaquoddy bay at the southwest, provide the province with a very extensive sea coast. Although larger in area than Nova Scotia, New Brunswick does not cover as many degrees of latitude as does the former, its most southern point being a little south of 45° north latitude and its most northern a little north of 48°, while Nova Scotia extends roughly from the 43rd to the 47th parallel. To its southwest is a group of islands belonging to the province, the most important being Campobello with an area of 115,000 acres, Grand Manan with an area of 37,000 acres and the West Isles, with an area of 8,000 acres. The soil of these islands, similar to much of that on the mainland, is generally fertile, but only a small proportion of it is under cultivation. New Brunswick has been well called the best watered country in the world; its numerous rivers provide access to extensive lumbering areas in its interior and to many of the most attractive hunting and fishing resorts in the Dominion.

Quebec.—Quebec might with considerable accuracy be included among the Maritime provinces, for the gulf of St. Lawrence is really a part of the Atlantic,

while salt water washes the coasts of the province for many miles on its northern and western borders. Besides including a narrow strip of land between the St. Lawrence and the international and New Brunswick boundaries, Quebec extends northward from the St. Lawrence and Ottawa rivers to Hudson strait, covering over 17° of latitude and an area of 706,834 square miles. The combined areas of France, Germany, Sweden and Italy are some 7,000 square miles less than the area of Quebec. Apart from its importance as the threshold of Canada and the gateway through which ocean navigation must pass on its way to the interior of the continent, Quebec is also noted for its natural resources. The untold timber limits of its northern areas form the basis for a great pulp and paper industry of the present and the future. Its rivers, many of them as yet comparatively unknown, may be harnessed to supply over one-third of the electric power available in Canada. Its mineral deposits, particularly those of asbestos, have long been known for their quality and extent, and the fisheries of the St. Lawrence river and gulf are equally familiar. Agriculturally, the climate and soil of the St. Lawrence shores and the plains of the Eastern Townships make the province eminently fitted for general farming operations.

Ontario.—The province of Ontario is the section of the Dominion contained between the great international lakes and Hudson bay and between the western boundary of Quebec and the eastern limits of Manitoba. Its most southern point is in north latitude 41° 41′ and its most northern in north latitude 56° 48′. The total area comprised within its limits is 407,262 square miles, of which its water area of 41,382 square miles forms the unusually large percentage of 10·16. The province is a little more than 8,000 square miles less in area than are France and Germany together, and when compared with the states to the south Ontario is found to be almost equal in extent to the combined area of the six New England states, New York, New Jersey, Pennsylvania, Ohio, Indiana, Illinois, Michigan, and Wisconsin. Many varieties of climate and soil are encountered, from the distinctively southern conditions found along the shores of lake Erie to the infinitely diverse ones of Hudson and James bay. Ontario, of all the provinces of Canada, is the centre of the country's manufacturing life, owing to its abundant water power resources and its proximity to the coal fields of Pennsylvania, but the many natural resources of its rural districts are not on this account neglected. Mining in the Sudbury, Cobalt and Porcupine districts is a thriving industry, the nickel coming from the Sudbury field amounting to three-fourths of the world's consumption; fruit farming in the Niagara district and general farming throughout the entire central part of the province are carried on extensively under unusually favourable conditions, while timber and furs are the most important products of the far north.

Manitoba.—Manitoba, the most easterly of the prairie provinces and also the oldest in point of settlement, extends roughly from a line joining the west coast of Hudson bay and the lake of the Woods to a line approximating closely to the 102nd meridian west from Greenwich. On the north and south it is bounded by the 60th and 49th parallels of latitude respectively. The total area of Manitoba is 251,832 square miles. This area may be compared to that of the United Kingdom with its area of 121,633 square miles, and Manitoba is seen to be 8,566 square miles greater than twice the total area of the British Isles. The province is typically an agricultural one, its southern plains being specially adapted to this form of industry. Its northern districts, with a topography very different from that o its prairies, are of importance in the production of copper ore and of timber products

Saskatchewan.—The central prairie province, contained within the western boundary of Manitoba, the 49th and 60th parallels of latitude, and the 110th meridian, covers an area of 251,700 square miles, but slightly less than that of Manitoba, and greater by 5,000 square miles than the combined areas of the United Kingdom and Norway. The country consists for the most part of the open rolling prairie at an average altitude of 1,500 feet above sea-level, while in the north it assumes a more broken aspect and is as yet but slightly developed. The climate is quite different from that of eastern Canada, with less precipitation and perhaps slightly more severe features than are encountered in many other parts of the country, but it is nevertheless most favourable to plant and animal growth. The northern districts are abundantly watered by lakes and rivers and are rich in coal and timber resources.

Alberta.—Lying between Saskatchewan on the east and the Rocky mountains and the 120th meridian on the west, and bounded on the north and south by the Northwest Territories and the United States respectively, is the province of Alberta. Its area is slightly greater than that of Saskatchewan or Manitoba, comprising a total of 255,285 square miles, a little more than the combined areas of Germany and Bulgaria. Formerly an almost exclusively ranching country, it has now become a great wheat producing region, the frontier of the grain growing area now approximating to the line of the foot-hills of the Rockies. In the southwest, considerable coal and oil mining are carried on; lumbering is important in the more mountainous western parts and in the north, where some ranching is still pursued in the less populous sections. The climate of Alberta is a particularly favourable one, less severe in summer than more eastern parts of the country and tempered in winter by the "Chinook" winds from the Pacific.

British Columbia.—The province of British Columbia is in some respects the most favoured part of Canada. Within its boundaries are reproduced all the varied climates of the Dominion and almost every natural feature, while some of its climatic and geographical conditions are peculiar to the province. Extending from the Rockies to the Pacific and from the 49th to the 60th parallel of latitude, its limits contain an area of 355,855 square miles, more than three times the area of Italy, slightly less than three times the area of the United Kingdom and but slightly less than the combined area of the United Kingdom, Norway and Italy. The many islands of the Pacific coast, notably Vancouver island with an area of about 13,500 square miles and the Queen Charlotte group, are included in the province and are remarkable for their temperate climate and abundant natural resources. Mention need hardly be made of the mineral resources, the great lumber trade, the fisheries and the agriculture of British Columbia.

Yukon and Northwest Territories.—The vast area of 1,449,300 square miles is included within the boundaries of Canada's northern subdivisions, the Yukon Territory and the three provisional districts of the Northwest Territories. This is almost twelve times the area of the United Kingdom, nearly half the area of the United States and more than the combined areas of the Argentine Republic and Chile in South America. Much of these northern regions is uninhabited, large areas of them even unexplored, but none the less they are of considerable potential economic value, owing to their possibilities in agricultural and pastoral production, to their mineral deposits such as the Yukon gold fields, as well as to their forest resources and their furs.

Summary of Land and Water Area.—For the convenience of the reader, the total land and water area of the Dominion, and its distribution into provinces and territories, is shown in Table 1.

1.—Land and Water Area of Canada by Provinces and Territories as in 1923.

Provinces.	Land.	Water.	Total Land and Water.
	sq. miles.	sq. miles.	sq. miles.
Prince Edward Island	2,184	–	2,184
Nova Scotia	21,068	360	21,428
New Brunswick	27,911	74	27,985
Quebec	690,865	15,969	706,834
Ontario	365,880	41,382	407,262
Manitoba	231,926	19,906	251,832
Saskatchewan	242,808	8,892	251,700
Alberta	252,925	2,360	255,285
British Columbia	353,416	2,439	355,855
Yukon	206,427	649	207,076
Northwest Territories—			
Franklin	500,000	–	500,000
Keewatin	205,973	6,851	212,824
Mackenzie	501,953	27,447	529,400
Total	**3,603,336**	**126,329**	**3,729,665**

The water area is exclusive of Hudson bay, Ungava bay, the bay of Fundy, the gulf of St. Lawrence and all other tidal waters, excepting that portion of the river St. Lawrence which is between Pointe-des-Monts and the foot of lake St. Peter, in Quebec.

2.—Physiography.

Topography.—The topographic features of the present surface of the American continent admit of its division, in Canada, into several physiographic provinces. The exposed surface of the old pre-Cambrian continent forms one of the largest divisions and has been called the Canadian Shield, the Archæan Peneplain and, in its southern portion, the Laurentian Highland. The mountainous country of the west constitutes the Cordilleras, while the mountains of eastern United States, in their continuation across the border, form the Appalachian highlands of eastern Canada. The Great Plains, with various subdivisions, occupy the area between the mountainous area of the west and the great, roughened surface of the Canadian Shield. The St. Lawrence lowland lies between the Laurentian and Appalachian highlands. Within the borders of the Canadian Shield an area on the southern margin of Hudson bay has been referred to as the "clay belt." It occupies a part of the basin that was submerged during the glacial period and covered with a coating of clay which smoothed over its inequalities and concealed most of the underlying rocks. Since its emergence the surface has been but slightly altered by drainage channels cut across it.

Canadian Shield.—The portion of the pre-Cambrian continent whose exposed surface still forms a large part of Canada, has an area of about two and a half million square miles. Its northern border crosses the Arctic archipelago, the eastern lies beyond Baffin island and Labrador and reaches the depressed area occupied by the St. Lawrence river, a short spur or point crossing this valley at the outlet of lake Ontario to join the Adirondack mountains in New York. The southern boundary runs from the spur west to Georgian bay, skirts the north shore of

lake Huron and sweeps almost entirely around the ancient depressed area occupied by lake Superior. The western edge, from the lake of the Woods and lake Winnipeg, bears northwest to the western end of lake Athabaska, and passes through the basins occupied by Great Slave and Great Bear lakes, reaching the Arctic ocean east of the Mackenzie River delta. In detail, the surface features of the Canadian Shield are irregular; but, viewed broadly, it has the conformation of a great plain, depressed toward the centre and in the north and slightly elevated along the eastern and southern borders, where it presents a somewhat steep outward slope. The general elevation in the eastern portion is under 2,000 feet, and over the larger part of the plain is about 1,000 feet. The highest portion is along the northeastern margin where it presents a steep face to the sea, rising to a maximum altitude of about 6,000 feet.

Appalachian Region.—The continuation of the Green mountains of Vermont into Canada may be traced in the Notre Dame mountains, which approach the St. Lawrence below Quebec and, continuing with more easterly trend, form the highland of the Gaspé peninsula. Over a large part of the region these hills hardly attain the dignity of mountains, but peaks rising 3,500 feet above the nearby coast are found in the Gaspé peninsula. The continuation of the White mountains of New Hampshire is found in the highlands of Maine and New Brunswick, the continuity being shown quite plainly by the rock-folding and other evidences of the great earth movements which caused the topography. An additional ridge apparently forms the present province of Nova Scotia, and although the highlands of that province in few places rise to elevations greater than 1,500 feet, the rock structure indicates that it was a mountainous country at no very remote geological period.

St. Lawrence Lowlands.—The southern interior of the continent consists of a plain of low relief, bordered on the east by the Appalachian mountains, on the west by the Cordilleran mountain systems, and on the north by the Laurentian plateau. This plain, in its Canadian portion, is known as the St. Lawrence lowlands, and extends from a short distance below Quebec city to lake Huron, with a length of 600 miles and an area of 35,000 square miles. To the northeast it becomes reduced in width, and in the vicinity of Quebec is represented by a narrow plateau or shelf on each side of the St. Lawrence river. The triangular area beyond, in which is the island of Anticosti, is structurally related to the central lowlands. The St. Lawrence lowlands may be divided into three sections: (1) the St. Lawrence river plain, separated from (2) the Eastern Ontario basin, by a point of crystalline rocks, and (3) the Ontario peninsula, a slightly more elevated plain whose eastern border is a steep escarpment, the eastern outcrop of a heavy limestone bed which underlies the western peninsula.

Great Plains.—A great area, including many diverse features, lies to the east of the Cordilleras. The portion that is included under the term Great Plains extends from the southwestern edge of the ancient surface forming the Canadian Shield, to the eastern edge of the mountainous region of the Cordilleras. In the belt traversed by the railway lines a three-fold division into prairie steppes, rising one above the other, is clearly recognizable, though the divisions are not distinguishable in the region farther north to which the term prairie is not applicable. For the purpose of description these three divisions are adopted and a fourth is added for the broken hilly country of the foot-hills. The first or eastern division comprises the plain lying between the Canadian Shield and the plateau formed of Cretaceous

sediments; the second extends from the edge of this plateau westward to the erosion remnants of former Tertiary deposits; and the third stretches from this line westward to the foot-hills. North of the prairie country these distinctions are less noticeable, and divisions two and three become merged into one.

Cordilleran Region.—The western part of the American continent is more or less mountainous. The Andean chain, which extends throughout the length of South America and broadens out in the United States and in Canada, has an average width of over 500 miles. This region, covering about 600,000 square miles in Canada, is the most elevated in the Dominion, many of the summits reaching heights of 10,000 feet, with occasional peaks over 13,000 feet above sea level. The mountainous tract forming the Cordilleras can be divided broadly into three parallel bands; a series of plateaus and mountains, comprised in the Columbia, Interior, Cassiar and Yukon systems forming the central part, referred to as the Central Belt; another series of parallel ridges east of the central plateaus, formed of fault rocks and folds and including the Rocky and Arctic systems, known as the Eastern Belt; and a third division between the plateau country and the Pacific, composed of the Pacific and Insular systems, called the Western Belt.

Following is a list of the principal named Canadian Cordilleran peaks exceeding 12,000 feet in elevation:—

Name.	Elevation.	N. Lat.	W. Long.	Range.
	feet.			
Alberta—				
Alberta	12,000	52° 14′	117° 36′	Rocky mtns.
Forbes	12,000	51° 48′	116° 56′	"
The Twins	12,085	52° 13′	117° 12′	"
British Columbia—				
Robson	13,068	53° 07′	119° 08′	"
Yukon—				
Augusta	14,900	60° 18′	140° 28′	St. Elias mtns.
Cook	13,700	60° 10′	139° 59′	"
Hubbard	16,400	60° 21′	139° 02′	"
King	16,971	60° 35′	140° 39′	"
Logan	19,539	60° 51′	140° 21′	"
Lucania	17,147	61° 01′	140° 28′	"
McArthur	14,253	60° 36′	140° 13′	"
Newton	13,860	60° 19′	140° 52′	"
St. Elias	18,000	60° 18′	140° 57′	"
Steele	16,644	61° 06′	140° 19′	"
Strickland	13,818	61° 14′	140° 45′	"
Vancouver	15,617	60° 21′	139° 42′	"
Walsh	14,498	61° 00′	140° 00′	"
Wood	15,885	61° 14′	140° 31′	"

3.—Rivers and Lakes.

General.—The waterways of Canada constitute not only one of its most remarkable geographic features but one of the most vital elements of its national existence. The water area of 126,329 square miles is unusually large, constituting almost 3½ p.c. of the total area of the country, whereas the water area of the United States forms but slightly more than 1½ p.c. of its area. The Great Lakes, with the St. Lawrence river, form the most important system of waterways on the continent and one of the most notable fresh water transportation routes in the world. Their value in facilitating the cheap and speedy shipment of grain from the prairie provinces cannot be overestimated. These lakes never freeze over, but usually most of their harbours are closed by ice about the middle of December and remain frozen over until the end of March or the beginning of April.

Drainage Basins.—The great drainage basins of Canada are the Atlantic (554,000 square miles), the Hudson bay (1,486,000 square miles), the Arctic (1,290,000 square miles), the Pacific (387,300 square miles), and the gulf of Mexico (12,365 square miles). Table 2 indicates the drainage areas of the more important rivers.

2.—Drainage Basins of Canada.

Drainage Basins.	Area Drained.	Drainage Basins.	Area Drained.
Atlantic Basin.	Sq. miles.	**Hudson Bay Basin**—concluded.	Sq. miles.
Hamilton	29,100	Kazan	32,700
Miramichi	5,400	Dubawnt	58,500
St. John	21,500		
St. Lawrence	309,500	**Total**	**1,486,000**
Saguenay	35,900		
St. Maurice	16,200	**Pacific Basin.**	
French	8,000	Yukon	145,800
Nipigon	9,000	Porcupine	24,600
Ottawa	56,700	Stewart	21,900
Lièvre	3,500	Pelly	21,300
Gatineau	9,100	Lewes	35,100
		White	15,000
Total	**554,000**	Alsek	11,200
		Taku	7,600
Hudson Bay Basin.		Stikine	20,300
Koksoak	62,400	Nass	7,400
George	20,000	Skeena	19,300
Big	26,300	Fraser	91,700
Eastmain	25,500	Thompson	21,800
Rupert	15,700	Nechako	15,700
Broadback	9,800	Blackwater	5,600
Nottaway	29,800	Quesnel	4,500
Moose	42,100	Chilcotin	7,500
Abitibi	11,300	Columbia	39,300
Missinaibi	10,600	Kootenay	15,500
Albany	59,800	Okanagan	6,000
Kenogami	20,700	Kettle	3,160
Attawapiskat	18,700	Pend d'Oreille	1,190
Winisk	24,100		
Severn	38,600	**Total**	**387,300**
Hayes	28,000		
Nelson	370,800	**Arctic Basin.**	
Winnipeg	44,000	Backs	47,500
English	20,600	Coppermine	29,100
Red	63,400	Mackenzie	682,000
Assiniboine	52,600	Liard	100,700
Saskatchewan	158,800	Hay	25,700
North Saskatchewan	54,700	Peace	117,100
South Saskatchewan	65,500	Athabaska	58,900
Red Deer	18,300		
Bow	11,100	**Total**	**1,290,000**
Belly	8,900		
Churchill	115,500	**Gulf of Mexico Basin**	**12,365**

NOTE.—Owing to overlapping, the totals of each drainage basin do not represent an addition of the drainage areas as given. Tributaries and sub-tributaries are indicated by indentation of the names. The Gulf of Mexico basin is that part of the southern area of the prairie provinces drained by the Missouri and Mississippi rivers and their tributaries.

St. Lawrence River System.—Most important of the lakes and rivers of Canada is the chain of the Great Lakes with their connecting rivers, the St. Lawrence river and its tributaries. This chain is called the St. Lawrence River system. The Great Lakes, separating the province of Ontario from the United States and connected by a series of canals with the St. Lawrence river, allow vessels drawing not over 14 feet of water to proceed from the Atlantic ocean to the interior of the Dominion as far as Fort William and Port Arthur, twin cities situated on lake Superior, practically half way across the continent.

Other River Systems.—Apart from the St. Lawrence, the great waterway of the eastern half of the Dominion, other systems also merit some attention. The

Saskatchewan river, for example, flowing eastward from the Rocky mountains to lake Winnipeg and thence northward by the Nelson river into Hudson bay, drains a great part of the plains of the western provinces. In the north, the Mackenzie river, with its tributaries the Slave, Liard, Athabaska and Peace rivers, follows the northerly slope of the Great Plain and empties into the Arctic ocean, its waters having traversed in all a distance of 2,525 miles. The Yukon river also, draining a great part of the Yukon territory, flows northward through Alaska into the Behring sea after a course of 2,300 miles. The Fraser, Columbia, Skeena and Stikine rivers flow into the Pacific ocean after draining the western slopes of the mountains of British Columbia. Table 3 gives the lengths of the principal rivers with their tributaries, classified according to the course taken by their waters.

3.—Lengths of Principal Rivers and Tributaries in Canada.

Names.	Miles.
Flowing into the Atlantic Ocean.	
Hamilton (to head of Ashuanipi)	350
Natashkwan	220
Romaine	270
Moisie	210
St. Marguerite	130
St. John	390
Miramichi	135
St. Lawrence (to head of St. Louis)	1,900
Manikuagan	310
Outarde	270
Bersimis	240
Saguenay (to head of Peribonka)	405
Peribonka	280
Mistassini	185
Ashwapmuchuan	165
Chaudière	120
St. Maurice	325
Mattawin	100
St. Francis	165
Richelieu	210
Ottawa	685
North	70
Rouge	115
North Nation	60
Lièvre	205
Gatineau	240
Coulonge	135
Dumoine	80
South Nation	90
Mississippi	105
Madawaska	130
Petawawa	95
Moira	60
Trent	150
Grand	140
Thames	135
French (to head of Sturgeon)	180
Sturgeon	110
Spanish	153
Mississagi	140
Thessalon	40
Nipigon (to head of Ombabika)	130
Flowing into Hudson Bay.	
Hayes	300
Nelson (to lake Winnipeg)	390
Nelson (to head of Bow)	1,660
Red (to head of lake Traverse)	355
Red (to head of Sheyenne)	545
Assiniboine	450
Souris	450
Qu'Appelle	270
Winnipeg (to head of Firesteel)	475
English	330

Names.	Miles.
Flowing into Hudson Bay—concluded.	
Nelson (to head of Bow)—concluded.	
Saskatchewan (to head of Bow)	1,205
North Saskatchewan	760
South Saskatchewan (to head of Bow)	865
Bow	315
Belly	180
Red Deer	385
Churchill	1,000
Beaver	305
Kazan	455
Dubawnt	580
Severn	420
Winisk	295
Attawapiskat	465
Albany (to head of Cat river)	610
Moose (to head of Mattagami)	340
Mattagami	275
Abitibi	340
Missinaibi	265
Harricanaw	250
Nottaway (to head of Waswanipi)	400
Waswanipi	190
Rupert	380
Eastmain	375
Big	520
Great Whale	365
Leaf	295
Koksoak (to head of Kaniapiskau)	535
Kaniapiskau	445
George	365
Flowing into the Pacific Ocean.	
Columbia (total)	1,150
Columbia (in Canada)	465
Kootenay	400
Fraser	695
Thompson (to head of North Thompson)	270
North Thompson	185
South Thompson	120
Chilcotin	145
Blackwater	140
Nechako	255
Stuart	220
Skeena	335
Nass	205
Stikine	335
Alsek	260
Yukon (mouth to head of Nisutlin)	1,765
Yukon (Int. boundary to head of Nisutlin)	655
Stewart	320
White	185
Pelly	380
Macmillan	200
Lewes	338

3.—Lengths of Principal Rivers and Tributaries in Canada—concluded.

Names.	Miles.	Names.	Miles.
Flowing into the Arctic Ocean.		**Flowing into the Arctic Ocean**—con.	
Mackenzie (to head of Finlay)	2,525	Mackenzie—concluded.	
Peel	365	Peace (to head of Finlay)	1,065
Arctic Red	230	Finlay	250
Liard	550	Parsnip	145
Fort Nelson	260	Smoky	245
Athabaska	765	Little Smoky	185
Pembina	210	Coppermine	525
Slave	265	Backs	605

NOTE.—In the above table the tributaries and sub-tributaries are indicated by indentation of the names. Thus the Ottawa and other rivers are shown as tributary to the St. Lawrence, and the Gatineau and other rivers as tributary to the Ottawa.

The Great Lakes.—Table 4 shows the length, breadth, area, elevation above sea-level and maximum depth of each of the Great Lakes.

4.—Area, Elevation and Depth of the Great Lakes.

Lakes.	Length.	Breadth.	Maximum depth.	Area.	Elevation above sea-level.
Name.	miles.	miles.	feet.	square miles.	feet.
Superior	383	160	1,180	31,810	602·29
Michigan	320	118	870	22,400	581·13
Huron	247	101	750	23,010	581·13
St. Clair	26	24	23	460	575·62
Erie	241	57	210	9,940	572·52
Ontario	180	53	738	7,540	246·17

Lake Superior, with its area of 31,810 square miles, is the largest body of fresh water in the world. As the international boundary between Canada and the United States passes through the centre of lakes Superior, Huron, Erie and Ontario, only half of the areas of these lakes given in the above statement is Canadian. The whole of lake Michigan is within United States territory. From the western end of lake Superior to the mouth of the St. Lawrence there is, with the aid of the canal system, a continuous navigable waterway. The total length of the St. Lawrence river from the head of the St. Louis river to the Pointe-des-Monts, at the entrance of the gulf of St. Lawrence, is 1,900 miles. The tributaries of the St. Lawrence, several of which have themselves important tributaries, include the Ottawa river, 685 miles long, the St. Maurice river, 325 miles long, and the Saguenay (to head of Peribonka), 405 miles long.

Other Inland Waters.—In addition to the Great Lakes there are large bodies of inland water in other parts of Canada. Of these only the following principal lakes, with their respective areas, need be mentioned here: in Quebec, lake Mistassini (975 square miles); in Ontario, lake Nipigon (1,730 square miles); in Manitoba, lake Winnipeg (9,459 square miles), lake Winnipegosis (2,086 square miles) and lake Manitoba (1,817 square miles); in Saskatchewan, Reindeer lake (2,436 square miles); in Alberta, lake Athabaska (2,842 square miles). All these are within the boundaries of the provinces as at present constituted, and are exclusive of lakes situated in the Northwest Territories, as, for instance Great Bear lake (11,821 square miles) and Great Slave lake (10,719 square miles) in the district of Mackenzie.

Table 5 gives a list of the principal lakes of Canada by provinces, with the area of each in square miles. The table corresponds with the delimitation of the provinces as altered by the Boundary Extension Acts, 1912 (2 Geo. V, cc. 32, 40 and 45).

5.—Areas of Principal Canadian Lakes by Provinces.

Names of Lakes.	Areas.	Names of Lakes.	Areas.
	Square Miles.		Square Miles.
Nova Scotia—		Quebec—concluded.	
Bras d'Or	230	Waswanipi	100
Little Bras d'Or	130	Whitefish	19
Total	**360**	**Total**	**11,330**
New Brunswick—		Ontario—	
Grand	74	Abitibi, portion in Ontario	331
		Bald	2
Quebec—		Balsam	17
Abitibi, portion in Quebec	25	Buckhorn	14
Apiskigamish	392	Cameron	6
Ashuanipi	319	Couchiching	19
Atikonak	331	Deer	7
Aylmer	8	Dog	61
Baskatong	17	Eagle	128
Burnt	56	Erie, portion in Ontario	5,019
Champlain, portion in Quebec	3	George, portion in Ontario	11
Chibougamau	138	Huron, including Georgian bay, portion in Ontario	14,331
Clearwater	478	La Croix, portion in Ontario	23
Evans	231	Lansdowne	98
Expanse	59	Long	75
Gull	125	Manitou, Manitou island	38
Grand Victoria	57	Mille Lacs, Lac de	104
Great Long	245	Mud	13
Indian House	306	Muskoka	54
Ishiamikuagan	87	Namakan, portion in Ontario	19
Kakabonga	65	Nipigon	1,730
Kaniapiskau	441	Nipissing	330
Kipawa	117	Ontario, portion in Ontario	3,727
Lower Seal	220	Panache	35
Matapedia	16	Pigeon	15
Manuan	113	Rainy, portion in Ontario	260
Mattagami	87	Rice	27
Megantic	14	St. Clair, portion in Ontario	257
Melville	1,298	St. Francis, river St. Lawrence, part	24
Memphremagog, part in Quebec	28	St. Joseph	245
Menihek	112	Saganaga, portion in Ontario	21
Minto	735	Sandy	245
Mishikamua	612	Seul	392
Mishikamats	122	Simcoe	271
Mistassini	975	Scugog	39
Mistassinis	206	Stony	19
Nemiskau	56	Sturgeon, English river	106
Nichikum	208	Sturgeon, Victoria county	18
Nomining	9	Superior, portion in Ontario	11,178
Obatogamau	56	Timagami	90
Olga	50	Timiskaming, part	52
Ossokmanuan	131	Trout, English river	134
Papineau	5	Trout, Severn river	233
Patamisk	44	Wanapitei	45
Payne	747	Woods, lake of the, part in Ontario	1,325
Petitsikapau	94	**Total**	**41,188**
Pipmaukin	100		
Pletipi	138	Manitoba—	
Quinze, Lac des	46	Atikameg	90
Richmond	269	Cedar	285
St. Francis, Beauce county	13	Cormorant	141
St. Francis, river St. Lawrence, part	59	Dauphin	200
St. John	350	Dog	64
St. Louis	56	Ebb-and-flow	39
St. Peter	130	Etawney	625
Sandgirt	106	Gods	319
Simon	12	Granville	392
Timiskaming, part	65	Island	551
Temiscouata	29	Kiskitto	69
Thirty-one Mile	23	Kiskittogisu	122
Two Mountains	63	Manitoba	1,817
Upper Seal	270		
Wakonichi	44		

5.—Areas of Principal Canadian Lakes by Provinces.—concluded.

Names of Lakes.	Areas.
	Square Miles.
Manitoba—concluded.	
Moose	552
Namew, part	12
North Indian	184
Neultin, part	76
Playgreen	224
Reed	86
Red Deer, west of lake Winnipegosis	86
Reindeer, part	134
St. Martin	125
Setting	58
Shoal	102
South Indian	1,531
Swan	84
Todatara, part	156
Waterhen	83
Wekusko	83
Winnipeg	9,459
Winnipegosis	2,086
Woods, lake of the, part	60
Total	**19,895**
Saskatchewan—	
Amisk	111
Athabaska, part	1,801
Buffalo	281
Candle	150
Chaplin	66
Cree	406
Cumberland	166
Dove	242
Ile-a-la-Crosse	187
Johnston	131
Last Mountain	98
Little Quill	70
Manitou	67
Montreal	138
Namew, part	54
Plonge, Lac la	383
Quill	163
Red Deer, on Red Deer river	97
Reindeer, part	2,302
Ronge, Lac la	343
White Loon	97
Witchikan	70
Wollaston	906
Total	**8,329**
Alberta—	
Athabaska, part	1,041
Beaver	89
Biche, Lac la	125
Buffalo	55
Claire	404
Lesser Slave	480
Pakowki	72
Sullivan	94
Total	**2,360**

Names of Lakes.	Areas.
	Square Miles.
British Columbia—	
Adams	52
Atlin, part	331
Babine	306
Chilko	172
Harrison	122
Kootenay	220
Lower Arrow	64
Okanagan	135
Owikano	98
Quesnel	147
Shuswap	124
Stuart	220
Tacla	135
Tagish, part	91
Teslin, part	123
Upper Arrow	99
Total	**2,439**
Northwest Territories—	
Aberdeen	514
Aylmer	612
Baker	1,029
Clinton-Colden	674
Dubawnt	1,654
Franklin	122
Garry	980
Gras, Lac de	674
Great Bear	11,821
Great Slave	10,719
Kaminuriak	368
Macdougall	318
Maguse	490
Martre, Lac la	1,225
Mackay	980
Nueltin, part	230
Nutarawit	343
Pelly	331
Schultz	123
Thoalintoa	184
Todatara, part	52
Yathkyed	858
Total	**34,301**
Yukon—	
Aishihik	107
Atlin, part	12
Kluane	184
Kusawa	56
Laberge	87
Marsh	32
Tagish, part	48
Teslin, part	123
Total	**649**
Canada	**120,925**

4.—Islands.

The northern and western coasts of Canada are fringed by islands, while along the eastern coast and in the Great Lakes and the St. Lawrence river a smaller number of important islands are found. Those on the north are mostly within the Arctic circle, but include several situated as far south as James bay; they are included in the provisional districts of Franklin and Keewatin. Baffin, Victoria and Ellesmere are the largest of the northern islands, with areas estimated at 211,000, 74,000 and 76,600 square miles respectively. On the Pacific coast,

south of the Alaskan boundary at Dixon entrance, are the Queen Charlotte islands (4,000 square miles) and Vancouver island (13,500 square miles), besides innumerable smaller islands. Manitoulin island in lake Huron and the Thousand Islands in the St. Lawrence at its outlet from lake Ontario are among the most important islands of our inland waters. On the eastern borders of the Dominion are the island of Anticosti, Prince Edward Island, one of the nine provinces, Cape Breton island and the Magdalen islands.

II.—GEOLOGICAL FORMATION.[1]

1.—Historical Outline and Geological Divisions.

Introduction.—While politically and economically Canada is a new country, from the geological point of view its central and eastern parts are of extreme old age, forming probably the largest area of Archaean or pre-Cambrian rocks in the world. At the same time comparatively recent geological events have rejuvenated the region, impressing upon it many of the characteristics of youth, as a result of which the Dominion presents impressive contrasts in geological structure and physical features.

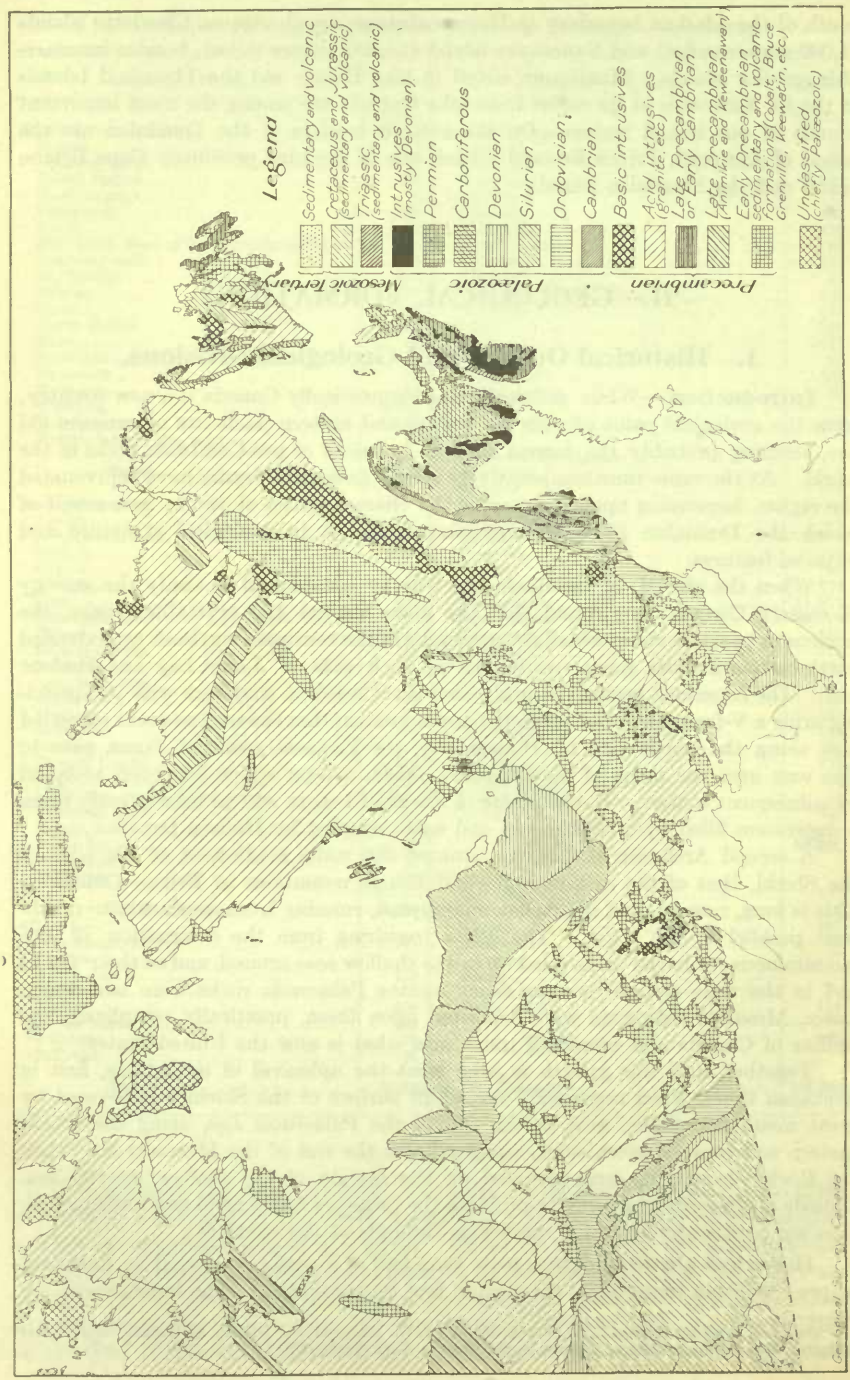
When the officials of the Geological Survey commenced to study the geology of eastern Canada they found that the more ancient and crystalline rocks, the nucleus or protaxis about which the remainder of the continent was built up, extended north-eastwards and north-westwards on each side of James bay and Hudson bay. The American geologist Dana called this Canadian Archaean with its spreading arms a V-formation, but when it became evident that the ancient rocks extended also along the north side of Hudson bay, the Viennese geologist, Suess, gave to this vast area the name of *the Canadian Shield*, a term which has been accepted by subsequent writers. In the centre of the Shield there was at least in early times a depression filled by a shallow sea and now occupied by Hudson bay.

A second Archaean protaxis is situated 500 miles south-west of the edge of the Shield, that of the Selkirk and Gold Range mountains in British Columbia. This is long, narrow, and somewhat interrupted, running from south-east to north-west parallel to the coast. The *débris* resulting from the destruction of the mountainous Archaean areas piled up in the shallow seas around, and on their flanks and in the wide trough between them marine Palaeozoic rocks were laid down. Later, Mesozoic sediments were deposited upon them, practically completing the outline of Canada and extending south into what is now the United States.

Together with this growth in area went the upheaval of mountains, first in Archaean times, when apparently the whole surface of the Shield was covered by great mountain chains, next at the end of the Palaeozoic age, along the south-eastern and south-western sides, and finally at the end of the Mesozoic era, when the Rocky mountains were elevated on the margin of the shallow interior sea. Outside of this area of mountain-building the rocks are fairly level and undisturbed, showing comparatively stable conditions throughout the continent.

Historical Outline.—Since more than half of Canada is covered by Archaean or pre-Cambrian formations, these must first be considered. The lowest rocks are

[1]Adapted from articles by R. W. Brock, M.A., LL.D., University of British Columbia, and Wyatt Malcolm, M.A., Dept. of Mines, Ottawa, in the Canada Year Book, 1921.



Geology of Eastern Canada.

the Laurentian granites and gneisses, which latter, though once believed to be *sedimentary*, are now known to be deep-seated eruptive rocks, which pushed up as molten material into the cold rocks above, lifting them as domes and themselves solidifying slowly far below the surface. These great domes of gneiss and granite, known as batholiths, are the commonest structure of the Archaean region.

Though the Laurentian rocks are the lowest, they are not the oldest, as the Keewatin rocks were already cold and solid at the period when they were heaved upward upon the shoulders of the Laurentian. The Keewatin rocks also consist chiefly of eruptive rocks, lava flows and volcanic ash now metamorphosed into greenstones and schists. With them are found in many places thick deposits of ordinary sediments, now changed into gneiss or mica-schist, together with the banded jasper and iron ore of the iron formation.

Much marble or crystalline limestone is also found in the Grenville series of the southern Archaean, which is probably of the same age as the Keewatin. During that period thousands of feet of lava, ashes, mud and sand were laid down on a sea-bottom that has utterly vanished. This was followed by the eruption of the domes of gneiss, lifting the earlier rocks into great mountain ranges, which were afterwards worn down to stumps, disclosing their foundations of granite and gneiss enclosed in a rude network of Keewatin schist.

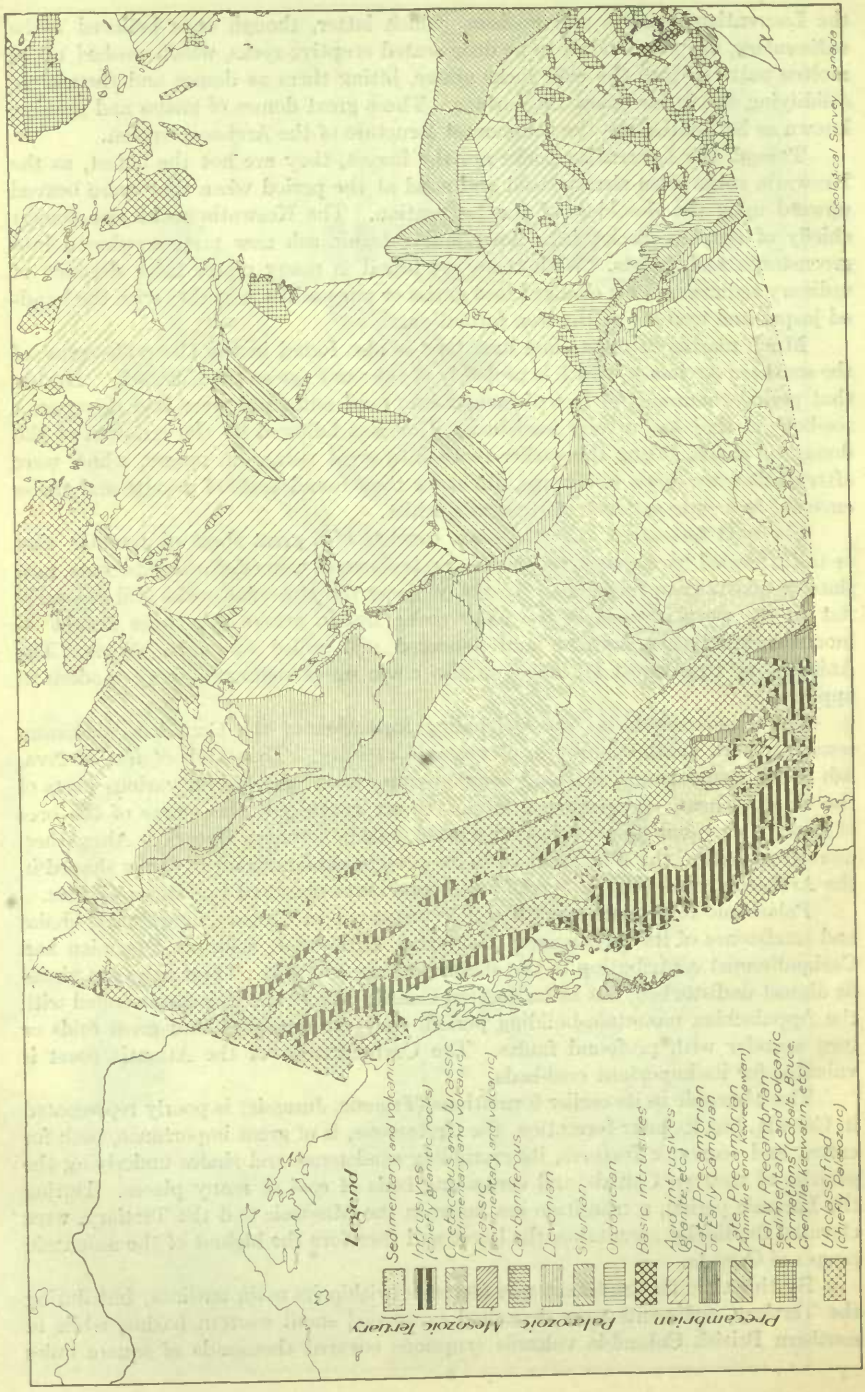
The next formation, the Huronian, consists of a great sheet of boulder clay or tillite formed by wide-spread glaciers, and masses of water-formed sediments, now slate or quartzite or limestone. In many places the Huronian rocks still lie nearly flat on the worn surfaces of the older rocks, but in others they were caught in mountain-building operations and squeezed and rolled out into schists. The Animikie or Uppermost Huronian is also made up of sediments, very modern in appearance.

The Keweenawan is the concluding formation of the Canadian Archaean, resulting from another outburst of volcanic activity. Thousands of feet of lava, ash rocks, coarse sandstones and conglomerates were piled up on various parts of the old continent. Keweenawan intrusives are considered the source of the ores of silver, nickel and copper mined on a great scale in northern Ontario. Altogether, more than half of the Dominion owes its present configuration to forms shaped in the Archaean rocks though overlaid and sometimes obscured by later activities.

Palaeozoic formations are all well represented in Canada, limestones, shales and sandstones of its various ages (Cambrian, Ordovician, Silurian, Devonian and Carboniferous) contributing to the shaping of the country. These in many places lie almost undisturbed, but in far eastern Canada, where the Palaeozoic ended with the Appalachian mountain-building period, they are crumpled into great folds or torn asunder with profound faults. The Carboniferous of the Atlantic coast is valuable for its important coal-beds.

The Mesozoic in its earlier formations (Triassic, Jurassic) is poorly represented in Canada, but its later formation, the Cretaceous, is of great importance, both for extent and economic features, its crumbling sandstones and shales underlying the prairies of western Canada and containing beds of coal at many places. During the Laramie period, a transition era between the Mesozoic and the Tertiary, were elevated the Rocky mountains, the latest and therefore the highest of the mountain ranges of Canada.

By this time the continent was complete within its main outlines; but during the Tertiary, sediments were deposited in several small western basins, while in southern British Columbia volcanic eruptions covered thousands of square miles


Legend
Sedimentary and volcanic
Intrusives (chiefly granitic rocks)
Cretaceous and Jurassic (sedimentary and volcanic)
Triassic (sedimentary and volcanic)
Carboniferous
Devonian
Silurian
Ordovician
Basic intrusives
Acid intrusives (granite, etc)
Late Precambrian or Early Cambrian
Late Precambrian (Animikie and Keweenawan)
Early Precambrian (sedimentary and volcanic formations (Cobalt, Bruce, Grenville, Keewatin, etc)
Unclassified (chiefly Paleozoic)
Mesozoic Tertiary
Paleozoic
Precambrian
Geological Survey, Canada

with lava or ashes. Thereafter the climate grew colder, and with the Pleistocene or Quaternary began the Glacial Period, which continued for a long time but was relieved by at least one inter-glacial period characterized by a warm climate. At the close of the Glacial Period the surface of the northern part of the continent had been profoundly modified, "the vast accumulations of loose materials, due to ages of weathering, being scoured away from the central parts of the glaciated areas, leaving bare rounded surfaces of fresh rock, while nearer the edges of the ice-sheets boulder clay was spread out or long loops of moraine were heaped up, blocking the valleys and transforming the whole system of drainage". During the subsequent thawing of the ice-sheets, the melting ice in the upper part of the valleys of the northward-flowing Canadian rivers formed glacial lakes in which sheets of silt or sand were deposited, forming what are now thousands of square miles of the most fertile lands of Canada. Also, as a consequence of the heavy load of ice, which at some points was two miles thick, the land sank some hundreds of feet, leaving thousands of square miles beneath the sea when the ice-sheets began to thaw. Relieved of its burden of ice, the sunken portions of the continent rose again, exposing wide belts of marine clay on the coastal plains. Many of the richest soils and the flattest plains of Canada owe their fertility and their smoothness to the process just described. Thus the geologically recent episode of the Ice Age "modified the old topography and hydrography of Canada, giving to one of the oldest lands under the sun its singularly youthful aspect".

Geological Divisions.—As a result of the process of geological development just described, the Canada of to-day may be divided into five main regions, each with distinctive characteristics of formation and present resources. A generally accepted division is as follows:—

1. The Appalachian or Acadian region, occupying the Maritime provinces and the mountainous south-eastern side of the province of Quebec.
2. The Canadian Shield or Laurentian Plateau, the vast upland surrounding Hudson bay and stretching through twenty degrees of latitude to the Arctic circle and in places four or five degrees beyond it.
3. The St. Lawrence Lowlands of southern Quebec and Ontario, extending south-west from the city of Quebec to the Detroit river.
4. The Interior Continental Plain, contained between the western edge of the Canadian Shield and the Rocky mountains.
5. The Cordilleran region, extending from the Rocky mountains to the Pacific coast.

In addition two other less important regions may also be noted:—1. The Arctic Archipelago, including the islands of the Arctic ocean north of Hudson bay and 2. The Lowlands of James and Hudson bays. These last two regions, while distinct as to formation and peculiarities, are yet of insufficient importance and interest to warrant the further more detailed mention given to the five principal regions.

Appalachian Region.—The Appalachian region occupies the hilly part of southeastern Quebec and the Maritime provinces. Here during remote geological ages the sedimentary beds of limestone, sandstone and shale that had been deposited beneath the sea were folded into mountain ranges, hardened, and intruded by igneous rocks. During long succeeding ages these mountains have been subdued, and little is left that may be regarded as mountains except the Notre Dame range of Quebec with a general elevation of 1,000 to 2,000 feet and with peaks rising above 3,500

feet, the broken hilly country of the northwestern part of New Brunswick, a section of this province bordering the bay of Fundy, and a central ridge in Nova Scotia.

In the ordinary processes of erosion much of the loosened material resulting from rock decay was carried seaward, and in recent times glaciation denuded a great deal of the more elevated sections of country, leaving barely enough soil to support a forest growth.

In some places sediments have been deposited subsequently to the great folding processes of earlier ages; they are unaltered, easily attacked by weathering agencies and are overlain by an ample depth of soil. The soils of Prince Edward Island, the Annapolis-Cornwallis valley and other sections are derived from these sandstones and shales of later deposition, the shales producing the clayey constituents and the sandstones yielding the sand that renders the soil porous and tillable. Calcareous slates have in places such as in Carleton and York counties, New Brunswick, broken down into fertile soils. In eastern Quebec sufficient soil has been retained in the valleys to render the land arable. The great fertility of the reclaimed marshes of Nova Scotia and New Brunswick is due to the fine silt deposited by the tides by which they were formerly submerged.

In Canada the Appalachian extension is found to possess many of the minerals which have placed some of the eastern States in the foremost rank of mineral and industrial districts of the world. Important deposits of coal, gypsum, and gold are mined in Nova Scotia. Of lesser but still considerable importance are the iron, stone and building material industries; manganese, antimony, tripolite and barite are also mined, and some attention has been paid to copper. The principal minerals of New Brunswick are gypsum, iron, coal, stone for building purposes and grindstones, clays, antimony, manganese, mineral water and oil-bearing shales. Natural gas is also a commercial product. The chief asbestos mines of the world are situated in the southeastern part of the province of Quebec, where there are also important deposits of chrome iron ore, copper and pyrite. Iron ores and gold also occur.

St. Lawrence Lowlands.—The St. Lawrence lowlands consist of the generally level, arable land south of the Laurentian plateau. This lies on both sides of the St. Lawrence above Quebec, reaching south to the international boundary, occupies the eastern part of Ontario, east of a line running southward from a point about 50 miles west of Ottawa, and forms that portion of Ontario lying southwest of a line extending from Kingston to Georgian bay.

These lowlands are among the most fertile of Canada's agricultural sections. They are underlain by flat-lying shales and limestones which yield readily to weathering. The physiographic features are favourable, and the residual material derived from the decomposition of limestones and shales results in a fertile, calcareous, clayey soil. The loose surface deposits are of great depth, in places exceeding 200 feet.

The region was overridden by the great glacier, but the glaciation had apparently slight denuding effect on this part of the country, and served to mix the loose materials resulting from the weathering of the shales and limestones, and contributed the potash-bearing ingredients transported from the granitic areas of the Laurentian plateau.

In its mineral deposits the area is very similar to the state of New York, its Palaeozoic rocks containing frequent occurrences of petroleum, natural gas, salt, gypsum and other non-metallic minerals. In addition, clay products, cement and other building materials are produced in large quantities.

Laurentian Plateau.—North of the valley of the St. Lawrence, from Newfoundland to beyond the lake of the Woods, and enclosing Hudson bay like a huge V, is an area of pre-Cambrian rocks, estimated to cover 2,000,000 square miles, or over one-half of Canada.

The plateau is underlain by hardened sediments and igneous rocks. The latter are much more widespread than the former, however, and granitic types predominate. Considerable inequalities of surface have been augmented by glacial action and a further effect of glaciation was the denuding of much of this region of its soil. Generally speaking, therefore, the physiographic and soil conditions are not favourable to agricultural pursuits. Over a great part of the area, however, sufficient soil has been retained to support a forest growth, although insufficient for agriculture. Within the plateau there are some valleys where areas of softer rock have afforded a greater abundance of soil that has not been removed by glaciation, and beautiful cultivated fields lend a pleasing contrast to the surrounding forest. In places the sediments deposited in the basins of glacial lakes have reduced the inequalities of the surface and produced large level areas of arable land. Interesting examples of these are furnished by the Clay Belt of northern Ontario and Quebec, traversed by the Canadian National railway, and by the flat section of country along the main line of the Canadian Pacific railway a few miles north of Sudbury.

The rocks of this pre-Cambrian formation are remarkable for the variety of useful and valuable minerals they contain. Iron, copper, nickel, cobalt, silver, gold, platinum, lead, zinc, arsenic, pyrite, mica, apatite, graphite, feldspar, quartz, corundum, talc, actinolite, the rare earths, ornamental stones and gems, building materials, etc., are all found, and are, or have been, profitably mined. Most of the other minerals, both common and rare, that are used in the arts have been found. Diamonds have not been located, but from their discovery in glacial drift from this area, it is altogether probable that they occur.

A tongue of these pre-Cambrian rocks extends into New York state and supports some large and varied mineral industries. Another extension crosses over from Canada into Michigan, Wisconsin, and Minnesota. In it are located the Michigan copper mines and the great lake Superior iron ranges. Along the southern edge of the pre-Cambrian in Canada there are the copper and gold deposits of Saskatchewan and Manitoba, the gold ranges of the lake of the Woods, the silver of Thunder bay, a succession of iron ranges occurring at intervals from Minnesota to the province of Quebec, the copper rocks of Michipicoten and Bruce Mines, the Sudbury copper-nickel deposits (probably the largest high-grade ore bodies in the world), the Montreal river and Cobalt silver areas, the world-famous Porcupine and other gold deposits, the corundum deposits of eastern Ontario, the magnetites of eastern Ontario and Quebec and their large apatite-mica deposits. In the far north about Coronation gulf, are rocks that will warrant prospecting, since they bear native copper very similar to the great Michigan occurrences.

Interior Continental Plain.—The greater portions of Manitoba and Saskatchewan that lie outside of the pre-Cambrian and the province of Alberta are preeminently agricultural, the flat-lying shales and sandstones having weathered down into the clays and clay loams which have made the plains one of the great wheat producing districts of the world. The greatest proportion of the surface deposits is derived from these underlying rocks. Some large stretches of the region, however, were submerged by glacial lakes in which fine silts and clays, carried down from the surrounding land and introduced by glacial streams, were deposited. Such

is the very fertile Red River valley. This is a part of the bed of a great lake that extended from the Laurentian plateau west to the Manitoba escarpment; it reached southward into the United States and northward 100 miles beyond lake Winnipeg.

The sedimentary rocks which underlie the greater part of the Interior Plain are chiefly of Cretaceous age and contain coal, building stones, clays, some of them high grade and cement materials. Natural gas over wide areas and under great pressure has been tapped in northern Alberta, and some oil has been encountered in the southwest. The lower sandstones of the Cretaceous along the Athabaska river, where they come to the surface, are for miles saturated with bitumen. These tar sands will probably average 12 per cent in maltha or asphaltum. Recent prospecting has discovered oil at Pouce Coupé on the Peace river, and at Fort Norman, on the Mackenzie river, near the Arctic circle. At other points in the Devonian rocks of the Mackenzie basin oil indications occur. The lignites of the eastern plains are useful for local purposes, and highly bituminized coals are found as the mountains are approached. Vast areas are underlain by lignite beds in Saskatchewan and Alberta, and the reserves of bituminous coal in Alberta are enormous. Gold is found in a number of the rivers coming from the mountains. Gypsum is quarried in Manitoba and important deposits also occur in Northern Alberta. Beds of salt have been discovered by drilling near McMurray, Northern Alberta.

Cordilleran Region.—The Cordilleran belt in South America, in Mexico, and in the western States, is recognized as one of the greatest mining regions of the world, noted principally for its wealth in gold, silver, copper and lead. The Cordilleras stand unparalleled in the world for the continuity, extent and variety of their mineral resources. In Canada and in Alaska this belt maintains its reputation, although in both, for the greater part, it is unprospected. In Canada the belt has a length of 1,300 miles and a width of 400 miles. It is pre-eminently a great mining region. Its rocks range from the oldest formations to the youngest; vulcanism and mountain building processes have repeatedly been active. The chief products of its lode mines in Canada are copper, gold, silver, lead and zinc. The Yukon territory is noted for its production of placer gold and is now attracting attention with rich silver ores. In addition to these minerals there are, within the same region, enormous resources of coal of excellent quality, varying from lignite to anthracite, and conveniently distributed.

The surface of the region is generally mountainous, though the interior section is reduced to an elevated plateau. Agricultural pursuits are therefore limited to the valleys. In these there are numerous terraces composed of silt carried down by streams issuing from former glaciers, the latter acting as eroding agents on the underlying rocks. These valley deposits are fertile and are well adapted to fruit culture.

2.—Economic Geology of Canada, 1922.[1]

The purpose of this paper is to call attention to the most important reports and articles treating of the economic geology of Canada published during 1922. Brief notes are given on the contents of the most important reports. This paper also indicates where detailed information regarding the mineral resources of the country may be obtained, since the articles referred to, although recently published, do not necessarily contain the best and most complete information on the subject.

[1]Contributed by Wyatt Malcolm, M.A., Geological Survey, Canada.

The numbers appearing after the names of writers or articles refer to the publishers listed at the end.

Asbestos.—Asbestos of the chrysotile variety is found at an elevation of 2,800 feet above the railway 3 miles north of Arrowhead, British Columbia. It occurs, according to M. F. Bancroft[1], in a belt of serpentine derived by alteration from a dyke of basic igneous rock. Slip fibre 4 to 5 inches long is found and cross fibre $\frac{1}{2}$ to $\frac{3}{4}$ of an inch long. An interesting description by W. A. Rukeyser of the Quebec asbestos deposits appears in the Engineering and Mining Journal-Press.

Coal.—Field investigations are continued from year to year with a view to broadening our knowledge of the extensive coal fields of Canada. During the year the results of investigations by J. D. Mackenzie, J. R. Marshall and W. L. Uglow in the Cumberland coal field, British Columbia[5], the Kananaskis area, Alberta,[1] and the North Thompson River area, British Columbia,[1, 5] respectively, were published. A well illustrated detailed report by John A. Allan on the Drumheller coal field, the source of an important supply of domestic fuel, appeared as one of a series of publications issued by the Scientific and Industrial Research Council of Alberta. This Council also published in its second annual report the results of analyses and boiler tests, and notes on storage and utilization of Alberta coals.

Copper.—An interesting and unusual type of copper deposit at the Drum Lummon mine on the west coast of British Columbia is described by V. Dolmage.[1] The ore, which consists of chalcocite, bornite and chalcopyrite, occurs in pegmatite dykes near their contact with the altered quartz diorite of the Coast Range batholith. Chalcocite and bornite in nearly equal proportions constitute over 90 p.c. of the ore minerals. The ores also carry gold and silver. Copper deposits on Lasqueti island are described by J. D. Mackenzie.[1]

Iron.—Interest has been manifested for several years in the Belcher islands, Hudson bay, as a source of iron ore. As a result of investigations made in 1921, G. A. Young[1] reports that the iron-formation consists of five bands in which highly ferruginous zones 10 to 50 feet thick occur. Although no deposits of commercial value under existing conditions were seen, four representative samples gave on analysis 35·42 per cent to 44·96 per cent of metallic iron. A paper by F. Hille[4] on the Mattawin iron range, Ontario, contains notes on the character of the ore and the commercial possibilities of the deposit. The iron ore deposits of Deroche and adjoining townships are briefly described by S. Brunton[1] and a brief description by W. H. Collins of the geological features of the various types of iron ores of Ontario appears in the Canadian Mining Journal.

Gold.—Gold continues to hold a position of increasing importance in Canada's mineral industry, and as a result the gold deposits receive considerable attention from economic geologists. In a report entitled "Ontario Gold Deposits, their Character, Distribution and Productiveness"[3], P. E. Hopkins presents concisely a wealth of information regarding the mode of occurrence of the gold deposits of Ontario and the extent of mining operations. C. W. Knight, in presenting a study of the Lightning River gold area, Ontario,[3] directs the prospector to the search for gold in the vicinity of feldspar porphyry and quartz porphyry intrusives.

J. C. Murray in a paper on the Shear Zones of Porcupine[4] points to the fact that not only do the ores occur in the vicinity of porphyry intrusives, but that shearing and deformation are essential to the localization of the ore bodies. The gold deposits of the Larder Lake area lie, according to H. C. Cooke[1], within bodies of dolomite which were formed by the alteration of other rocks along sheared zones.

The gold occurs as thin leaflets in the free state in fine fractures in quartz of the quartz veins cutting the dolomite. The gold is of later age than the quartz and the pyrite and it is stated that absolutely no connection exists between the concentration of pyrite, the only sulphide in the rock, and the gold content.

Reports appeared during the year on other areas in Ontario where gold has been discovered and development work done. Among these are reports on the Goudreau area[1, 3] by E. Thomson and A. G. Burrows, on the Schreiber area[3] by P. E. Hopkins, on the Boston-Skead area[3] by A. G. Burrows and P. E. Hopkins, on the Wanapitei area[1] by T. T. Quirke, and on the Black River area[3] by D. G. H. Wright. There were reports also by B. R. MacKay on the placers of the Chaudière River basin, Quebec[1], and by H. C. Cooke on the Rice Lake area, Manitoba[1].

Investigations made by W. A. Johnston in the Cariboo district, British Columbia,[1, 5] show that there is still a large amount of gold in this district that is recoverable by dredging. The placers of Cedar creek, which have yielded considerable gold during the last year, are described by W. A. Johnston[4], the gold-quartz veins of the Bridge River area, British Columbia[1], by W. S. McCann, the quartz veins of the Barkerville area by W. L. Uglow[5], and the Surf Inlet mine by V. Dolmage[1].

Nickel.—A concise description of the Shebandowan, Ontario, nickel-copper deposits is given by J. G. Cross[4]. The ore occurs in lenses 2 to 20 feet wide and carries nickel, copper, and cobalt, and quite an appreciable amount of rare metals of the platinum group. The nickel-copper deposits of the Oiseau River area, Manitoba, consist, according to H. C. Cooke[1], of pyrrhotite carrying more or less pentlandite and chalcopyrite. The deposits are found as irregularly shaped accumulations, or segregations, within a gabbro sill near what was originally its base.

Oil-shale.—Oil-shales are shales carrying organic matter from which oil can be obtained by retorting. They arouse increasing interest as the possible exhaustion of the world's petroleum resources forces itself upon public attention. The oil-shales of Canada that have attracted greatest attention are those of southeastern New Brunswick. A report on a detailed investigation made by W. J. Wright on a deposit at Albert Mines[1] contains descriptions of the geological formations and their structural features, the results of analyses of many samples, and suggestions as to how to test further the commercial possibilities of the deposit. There are other deposits in New Brunswick and Nova Scotia, but no detailed work was done on them. The results of experimental work in retorting the shales of the Rosevale area are presented by W. S. McCann[1].

Petroleum.—Considerable information was published[1] during 1922 on the geology of Mackenzie River basin, more particularly in its relation to the petroleum possibilities of that part of Canada. A detailed description is given by A. E. Cameron of the sedimentary formations underlying the area to the southwest of Great Slave lake, an area drained by Hay and Buffalo rivers. E. J. Whittaker reports on geological observations made between Great Slave lake and Simpson, M. Y. Williams on the geology east of Mackenzie river between Simpson and Wrigley and G. S. Hume on the geology of North Nahanni and Root rivers west of the Mackenzie. General structural features of Mackenzie basin are described by D. B. Dowling.

A consideration of the utilization of the bituminous sands of Athabaska river is presented by S. C. Ells in the summary report of the Mines Branch, Department of Mines, Ottawa, and by K. A. Clark in the second annual report of the Scientific and Industrial Research Council of Alberta.

The Department of Lands, British Columbia, published a report by John A. Dresser on the results of borings made by the provincial government for oil near Peace river northwest of Hudson Hope. Five borings were made, but only a trace of oil was obtained. Suggestions are given in the report as to locations for further exploratory drilling.

Silver.—The Salmon River area, British Columbia, has recently been forced upon the attention of the mining public by the big dividends paid by the Premier mine. The ore deposits, which have been described by S. J. Schofield and G. Hanson,[1] are rich in silver and gold. The ore was deposited in fissures and shear zones from solutions emanating from the intrusive granite magma of the Coast Range batholith. The deposits were afterwards to some extent enriched by secondary action.

The results of a re-study by C. W. Knight of the Cobalt mining district were published in the Engineering and Mining Journal-Press. In summing up, the writer states that it is not likely that operations in Cobalt will ever again reach their past magnitude, but maintains that mining will doubtless be carried on for generations in or around Cobalt, or in the outlying areas of Gowganda, South Lorrain, Casey, Montreal river and elsewhere in the district. In this connection it is interesting to know that work in South Lorrain has been revived and very rich silver ore is being mined. Another point of interest is the evidence presented by J. M. Bell in the Bulletin of the Institute of Mining and Metallurgy of oxidation having taken place to a depth of at least 420 feet. A further contribution to the geology of Cobalt is made by A. R. Whitman in the University of California publications; it is claimed that the ores were deposited in joints developed as a result of folding subsequent to the solidification of the diabase and that they were derived from the diabase sheet itself, transported, and deposited through diffusion in relatively stagnant water. A consideration by E. S. Bastin of the nature of the silver-depositing solutions at Cobalt appears in Bulletin 735 of the United States Geological Survey.

Further studies by W. E. Cockfield[1] in the Mayo district, Yukon, show that the argentiferous lead ores of Davidson mountains are very similar to those of Keno hill although not quite so rich in silver. Other reports on silver producing areas are made by A. G. Burrows on Gowganda,[3] by G. Hanson on Upper Kitzault river,[1] and by A. L. Parsons on the Thunder Bay area.[3]

Miscellaneous.—F. J. Alcock[1] describes in considerable detail the geology of the lead-zinc deposits of Lemieux township, Quebec. The lead and zinc minerals occur in veins cutting Devonian shales and limestones and are thought to be genetically related to deep-seated intrusives. The feldspar deposits in the Ottawa district are described in a paper by N. B. Davis[5], who directs attention to a deposit in Derry township where a fine grade of cream or buff coloured feldspar is produced.

H. S. Spence is the author of two valuable monographs published in 1922, one on talc and soapstone in Canada, and one on barium and strontium in Canada.[2] These monographs contain descriptions of the known occurrences of the minerals in Canada, of the methods of mining and preparing the minerals for the market, and of their uses. A report by J. Keele and L. H. Cole presents the results of investigations into the character and extent of the structural materials to be found along the St. Lawrence river between Prescott and Lachine.[2]

Preliminary statements regarding investigations on the alkali deposits of western Canada and mineral pigments in eastern Canada have been made respectively by L. H. Cole and H. Frechette.[2] J. Keele describes in the Transactions of

the Royal Society of Canada the occurrence of certain clays and sands in the basin of Moose river, Ontario, that are thought to be of Cretaceous age; some of the clays are high grade refractories. H. V. Ellsworth, in describing the radium-bearing pegmatites of Ontario[1], states that radium and thorium minerals occur in the pegmatites in relatively great abundance, so disseminated that it appears improbable that concentrations will be found sufficiently large and rich to be of commercial value.

In addition to the above, much valuable information on the development of the mining industry is contained in the annual reports of the various provincial departments of mines.

SOURCES OF REPORTS AND ARTICLES REFERRED TO IN THE TEXT: [1]Geological Survey, Ottawa. [2]Mines Branch, Department of Mines, Ottawa. [3]Department of Mines, Toronto, Ontario. [4]Canadian Mining Journal, Gardenvale, Quebec. [5]Canadian Institute of Mining and Metallurgy, Drummond Building, Montreal, Quebec.

III.—SEISMOLOGY IN CANADA.[1]

Seismology—the branch of science which treats of earthquakes—has received considerable attention in Canada during recent years. It has been generally recognized that earthquakes are frequent in regions of adjustment of strata and are characteristic of the newer mountain and coast regions where abrupt changes in level are present. Seismological researches, while recording their location, duration and intensity, seek to determine particular causes. They ascertain the physical properties of the earth's crust and interior as revealed by the peculiarities of the recorded waves after their passage through the earth. Instruments as developed by seismological research for the better recording of earth tremors are being used commercially in many ways, not the least important being for the mapping out of underground densities in order to locate minerals and oil without frequent and expensive borings.

During the years for which records are available, Canada has been but slightly affected by earthquakes. Historically a record shows that the St. Lawrence valley was shaken by a great quake in 1663. In 1899 a great disturbance occurred in Alaska at Yukatat bay, very close to Canadian territory. Slight shocks are very occasionally experienced in British Columbia and along the drainage system from the Great Lakes to the sea, but no damage to property or loss of life has been caused within the past century. It may be said that no active fault lines of any importance are found in Canada.

At present five seismologic stations, all maintained by the Dominion Government, are in active operation in Canada, and are situated at Halifax, Ottawa, Toronto, Saskatoon and Victoria. Two of these—at Toronto and Victoria—are under the Meteorological Branch of the Department of Marine and Fisheries, while the three remaining stations are controlled by the Dominion Observatory Branch of the Department of the Interior, with the assistance and co-operation of the universities at Halifax and Saskatoon.

The records for Toronto and Victoria are published from Toronto, whence monthly bulletins are issued to seismological observatories interested, giving full details of all quakes as registered. The records for Ottawa, Saskatoon and Halifax are published from Ottawa. Monthly bulletins are issued to about 230 seismological observatories interested giving full details of the quakes as registered. These

[1]Contributed by Ernest A. Hodgson, M. A., Seismologist, Dominion Observatory, Ottawa.

are supplemented yearly by a publication giving the location of epicentres of all earthquakes of which any trace is registered at Ottawa. Data are gathered from all the reporting seismological stations of the world.

Regular research work in seismology is carried on at Ottawa where the full time of two seismologists is given to the work of earthquake study alone. The reports are issued in the publications of the Dominion Observatory, Ottawa.

The natural and instrumental data for each station are as follows:—

Halifax.—Lat., 44° 38′ N.; Long., 63° 36′ W.; Alt., 47·3 m. Substrata, carbonaceous slate. Equipment:—Small Mainka Pendulum Seismograph, Mechanical registration. Components N.S., E.W. Mass of each 139·3 kgm. Period of each, 10 sec. Damping ratio of each, 6:1. Magnification of each, about 60. Time is checked automatically each hour by signal from Western Union Telegraph and is to be depended on to one or two seconds.

Ottawa.—Lat., 45° 23′ 38″ N.; Long., 75° 42′ 57″ W.; Alt., 82 m. Substrata, boulder clay over limestone (Ordovician). Equipment:—(1) Bosch Horizontal Seismographs. Photographic registration. Independent components, N.S.,E.W. Mass of each 200 gm. Period of each, about 5·5 sec. Damping ratios, N.S., 2:1, E.W., 18:1. Magnification of each, 120. (2) Milne-Shaw Horizontal Seismographs. Photographic registration. Independent components, N.S., E.W. Mass of each, 1 lb. Period of each, 12 sec. Damping ratio of each, 20:1. Magnification of each, 250. (3) Wiechert Vertical Seismograph. Mechanical registration. Mass, 80 kgm. Period, 6 sec. Damping ratio, 20:1. Magnification, about 160. (4) A deformation Instrument. Photographic registration. Components, N.S., E.W. Mass of each, about 20 gm. Period of each, about 36 sec. Undamped. Used for determination of tilt. The time service at Ottawa is that of the Dominion Observatory and the registration on the record is kept correct to within 0·2 sec.

Toronto.—Lat., 43° 40′ N.; Long., 79° 24′ W.; Alt., 115·5 m. Substrata, sand and gravel on boulder clay to a depth of about 15 m. then shale over crystalline rock (Laurentian) to a depth of about 335·5 metres. Equipment:—(1) Milne Seismograph. Photographic registration. E.W. component. Mass, 0·23 kgm. Period, 18 sec. No damping. (2) Milne-Shaw Horizontal Seismographs. Photographic registration. Independent components, N.S., E.W., Mass of each, 1 lb. Period of each, 12 sec. Damping ratio of each, 20:1. Magnification of each, 150.

Time markings by Toronto Observatory clock. The registration has an error of 2 sec. The time is checked by meridian transits.

Saskatoon.—Lat., 52° 08′ N.; Long., 106° 40′ W.; Alt., 515 m. Substrata, clay and sand. Equipment: Small Mainka Pendulum Seismograph. Mechanical registration. Components, N.S., E.W. Mass of each, 139·3 kgm. Period of each, approximately 9 sec. Damping ratio of each, 5:1. Magnification of each about 60.

Time by local clock, checked occasionally by telephone with train time.

Victoria.—Lat., 48° 24′ 50″ N.; Long., 123° 19′ 28″ W.; Alt., 67·6 m. Substrata, igneous rock. Equipment:—(1) Milne Seismograph. Photographic registration. E.W. comp. Mass, 0·23 kgm. Period, 18 sec. No damping. (2) Milne-Shaw Horizontal Seismographs. Photographic registration. Independent components, N.S., E.W. Mass of each, 1 lb. Period of each, 12 sec. Damping ratio of each, 20:1. Magnification of each, 250. (3) Wiechert Vertical Seismograph. Mechanical registration. Mass, 80 kgm. Period, 5 sec. Magnification, 70.

Time service of the meteorological station. Registration correct to ± 1 sec.

IV.—THE FLORA OF CANADA.[1]

Introduction.—It is a well known fact that, at a geologically recent period, practically the whole of Canada from the Rocky mountains east was covered with glacial ice which, slowly advancing southward, reached as far as Central Missouri. Whatever vegetation may have flourished in Canada before the glacial period was gradually forced to migrate southward as the ice advanced. During this retreat many species were no doubt wiped out of existence, but a certain number, belonging perhaps largely to types which now are found in the arctic regions, managed to survive. In fact, we must surmise that, during the glacial period, the vegetation immediately in front of the continental ice was arctic in character and that, when the glaciation reached its maximum, those parts of the United States which were immediately to the south of the ice had a flora similar to that now existing in the far north.

With the return of a warmer climate and the gradual recession of the continental ice, vegetation began to move back northward, with the arctic types as a vanguard

[1]This article, reprinted in slightly abbreviated form from the 1921 Year Book, is a revised and popularized edition of a paper, entitled "Flora of Canada," by the late Mr. J. M. Macoun, C.M.G., F.L.S., and M. O. Malte, Ph. D., published in Canada Year Book, 1915, and also as Museum Bulletin No. 26, Geological Survey, Department of Mines, Ottawa, 1917.

followed by more temperate and southern ones. Generally speaking, the Canadian flora, as it exists today, may therefore be said to be composed of immigrants that took possession of the country after the glacial period and established themselves in botanical provinces in accordance with their specific requirements. These botanical provinces, generally referred to as zones, are briefly described in the following pages.

The Arctic Zone.—Botanically, the arctic zone is the region lying north of the tree line. In Canada it extends far to the south of the arctic circle, especially in the eastern parts of the Dominion. Its southern limit is, roughly, a line running from the estuary of the Mackenzie river to the mouth of the Churchill river on the west coast of Hudson bay. East of Hudson bay, the tree line, i.e., the southern boundary of the arctic zone, runs from about lat. 56° on Richmond gulf to the mouth of George river on the eastern shore of Ungava bay, and from there in a southeasterly direction along the coast of Labrador to Hamilton inlet. South of Hamilton inlet a narrow strip along the coast as far south as the strait of Belle Isle and extending a short distance to the west from there is also barren of real trees and therefore has an arctic aspect. This strip can hardly be included in the arctic zone proper, however, although a few arctic plants may be found there; the lack of trees and the barren appearance in general are caused by the arctic current which flows from the north along the coast and through the strait of Belle Isle.

The vegetation in the arctic zone is generally of a low-growing and even dwarfed type. The woody plants, even when half a century old or more, reach a very inconspicuous height in comparison with their next of kin farther south and are often prostrate or even trailing along the ground. In the more northern parts of the arctic zone the most conspicuous woody plants are willows and dwarf birches. Further south, on the tundra, i.e., the more or less boggy lowlands north of the tree line, the woody plants are chiefly represented by members of the blueberry family.

In respect to herbaceous vegetation, the arctic flora of Canada is very closely related to the so-called circumpolar flora in general. Not only are there many species in arctic Canada which occur all around the north pole, but in general characteristics the Canadian arctic plants are very similar to arctic plants elsewhere, particularly to those growing in Greenland and arctic Europe.

A striking form of growth encountered in many species is the dense, compact, bunchy type, which especially is found well developed on rocky ground in the northern sections of the arctic zone. This form of growth is characteristic also of arid and semi-arid regions in hot climates, and at first sight it may seem strange that it should also be found in the arctic. The arctic zone, however, from a plant physiological point of view, is somewhat akin to arid regions farther south. In the latter regions the bunch growth is generally considered to be associated with a shortage of water supply in the ground, and to some extent the same may be said of arctic areas. The ground may apparently be well supplied with moisture, but the plants relying upon the moisture are often unable to utilize it on account of the temperature in the ground being at times so low that the water-absorbing parts of the plants are incapable of functioning.

Compactness of growth is also displayed by a number of plants which, although not growing in defined bunches, form dense and often rather extended mats. On the other hand, there are quite a number of species which grow neither in bunches nor in mats; these are particularly common on the tundra.

Practically all arctic plants are perennials. Owing to the shortness of the season they are often caught by early frost while the blossoms are still undeveloped and before their fruit has ripened. Indeed, many species regularly enter the winter

in this condition and hibernate with flower and leaf buds in an advanced stage of development. When the returning sun again wakes them up to renewed activity, they are therefore ready to spring into blossom over-night, as it were, and to present a surprisingly rapid development of vegetative as well as of floral organs.

The Sub-arctic Forest Zone.—The sub-arctic or so-called coniferous forest extends, in the east, from the arctic zone southward to a line running approximately from Anticosti to the south end of lake Winnipeg. This line is practically identical with the northern limits of the white and the red pine. West of lake Winnipeg the sub-arctic forest is bounded to the south and west by the prairies and the foothills of the Rocky mountains, respectively. The Gaspé peninsula and sections of New Brunswick may also be included in the sub-arctic forest zone.

The sub-arctic forest, as the name indicates, is decidedly boreal. The trees do not reach any imposing height and the number of species which make up the forest is small in comparison with the number occurring in the hardwood forest zone to the south. The sub-arctic forest is largely coniferous in character, the black and white spruce being the dominating trees. Of the other coniferous trees the Banksian pine is the most important species. It reaches perfection in the western part of the zone and constitutes the chief source of supply of lumber for the northern prairie region. The other trees characteristic of the zone in general are aspen and balsam poplar, white birch, larch, and balsam fir. Between the gulf of St. Lawrence and lake Winnipeg, white cedar, white elm, and ash are occasionally met with, but these trees cannot be properly considered as belonging to the sub-arctic forest.

Perhaps the most striking characteristic of the sub-arctic forest is the abundance of berry shrubs such as gooseberries, currants, blueberries, raspberries, yellow-berries, and high-bush cranberries. Another is the remarkable uniformity, in general character as well as in species, exhibited throughout the zone. This lack of variety is especially marked in the vegetation of the bogs, which are very numerous throughout the zone, the species encountered in the bogs of any one part of the zone being characteristic of practically the whole sub-arctic forest.

The herbaceous flora of the sub-arctic forest is also remarkably uniform throughout, and hardly a species is found that does not occur either in the arctic zone or in the hardwood forest zone to the south. A noteworthy exception to this rule is a small water lily, in fact the smallest of the water lillies, which is found in this area only.

The sub-arctic forest zone is as yet almost undisturbed by settlers except in some sections of the so-called clay belts of northern Quebec and Ontario. It forms a vast reserve of national wealth and may in the future furnish the chief supply of wood for the pulp and paper industries in eastern North America.

The Hardwood Forest Zone.—The hardwood forest zone includes all eastern Canada south of the sub-arctic forest, with the exception of a small region in southern Ontario. It is characterized chiefly by deciduous trees, the principal ones being basswood, sugar maple, red maple, black ash, white ash, white elm, yellow birch, red oak, burr oak, and beech. Of the coniferous trees white pine, red pine, hemlock, and white cedar are the most important. The underbrush, although very variable and made up of a great number of species, is generally rather scanty and becomes conspicuous, as a component of the forest, only along its borders or where the woods are open. Among the most typical shrubs may be mentioned service berry, moosewood, purple flowering raspberry, sumach, poison ivy, and arrow-wood.

As the rainfall is abundant throughout the zone, the herbaceous vegetation, where light and soil conditions are favourable, is rich in both species and individuals. In the woods proper it is rather insignificant after the foliage of the trees is fully developed. In the spring, however, it is very luxuriant and, especially where the soil is rich and deep, there is a magnificient display of beautifully coloured and showy flowers, for instance trillium, bellwort, dog's-tooth violet, showy orchis, jack-in-the-pulpit, spring beauty, violets (blue, yellow and white forms), hepatica, dutchman's breeches, squirrel corn, bloodroot, pepper-root, barren strawberry, flowering winter-green, blue phlox, etc. Others, less conspicuous but characteristic of the hard-wood forest's spring flora, are species of sedges, wild ginger, blue cohosh, mitre-wort, star flower, showy lady's slipper, etc. Characteristic of the bogs of the zone are, among others, various species of orchids and the pitcher-plant. The autumn flowers are chiefly members of the composite family, with asters, golden rods, and joe-pye in greatest profusion.

Very characteristic of the hardwood forest zone is the autumnal colouring of the leaves of trees, shrubs, and herbaceous plants which lasts a comparatively long time, from about the first week of September to the second week in October, dependent on the dryness of the season. During that period a splendid display of colours is exhibited, especially in open, mixed woods where the underbrush is well developed. Shades of yellow, golden bronze, red and scarlet are mixed in a gorgeous symphony of colours, generally marvellously modulated by the sombre, deep, dark or bluish green of the conifers which are dotted among the deciduous trees. No such wealth of autumnal colour is met with in any of the other zones.

The Carolinian Zone.—This zone is confined to a small tract of land in southern Ontario, bounded to the south by lake Erie and to the north by a line running approximately from the northern shore of lake Ontario to Windsor. In general physiognomy it is rather similar to the hardwood forest flora just described, but differs greatly in its characteristic species which are decidedly southern. It exhibits a large number of plants, woody as well as herbaceous, which occur nowhere else in Canada.

The most characteristic trees are the hickories (six species), the oaks (ten species), black walnut, chestnut, and sycamore. Less abundant and more local in their distribution are the cucumber tree, the tulip tree, the flowering dogwood, which all have beautiful and very conspicuous flowers, the papaw, the red mulberry, the American crabapple, the sour gum, the sassafrass, and others.

The herbaceous vegetation is very rich and at least a hundred species which occur nowhere else in Canada are found in the zone. A few of the most conspicuous ones may be mentioned, viz.: yellow nelumbo or lotus flower, may apple, wild lupine, tick trefoil, flowering spurge, swamp rose mallow, wild pansy, prickly pear, poke milkweed, wild potato vine, downy phlox, water-leaf, bee balm, fox-glove, tall bell flower, great lobelia, ironweed, dense button snakeroot, prairie dock, cup plant, sunflowers, tall coreopsis, Indian plantain and showy lady's slipper.

Golden seal and ginseng were at one time abundant but are now practically extinct. Indeed a similar fate is also threatening many of the other species characteristic of the zone, on account of the clearing of the land for agricultural purposes.

The Prairie.—Under the general term prairie is understood the vast grass-covered area of the provinces of Manitoba, Saskatchewan, and Alberta. It is bounded to the east and north by the sub-arctic forest and to the west by the foothills of the Rocky mountains.

The prairie, which begins a few miles east of Winnipeg, has been subdivided into three zones, known as the first, second and third "prairie steppes." These steppes are rather indefinite, botanically speaking, and they have one thing in common as far as the vegetation is concerned. The luxuriance and general appearance of their flora are to a conspicuous degree dependent on the rain and snowfall. In the case of the spring vegetation, the rainfall during the previous year and the snowfall during the preceding winter are dominant factors, so much so that, in the event of lack of sufficient precipitation, the spring flora may in certain years be either very poorly represented or even almost entirely absent. The summer and fall vegetation are to an equal extent dependent on the present season's precipitation and thus it may happen that a district which one year displays a luxuriant growth, rich in species and individuals, may in a following year appear almost barren of flowering plants. Lack of precipitation is also largely responsible for the fact that in some seasons the grass vegetation, so characteristic of the prairie, may remain practically at a standstill without heads or seeds being formed.

First Prairie Steppe.—This area includes "the low plain of Manitoba, bounded by a line of elevated country, which commences at the international boundary at a point some distance west of Emerson, and extends northwestwardly under the names of Pembina, Riding, Duck, Porcupine and Pas mountains."

The southeastern part of the area so defined differs from the true prairie in that it is characterized by many woodland plants which have their home east of the Great Lakes but which occur rarely, if at all, between lake Huron and the Manitoba border. Among these plants may be mentioned nettle tree, basswood, wild plum, hawthorn, Virginia creeper, moonseed, bloodroot, columbine, hog peanut, tick trefoil, prickly cucumber, species of gentian, lousewort, Indian paint-brush, ox-eye and cone-flower. The flora of this region is distinct from those of the areas farther to the northwest.

The prairie proper of the first prairie steppe is confined chiefly to what is known as the Red River valley, i.e., the low, flat plains south and west of Winnipeg. In this region trees are met with only in narrow fringes along the rivers, oak, elm, poplar, and Manitoba maple being the most abundant. Away from the borders of streams the prairie is treeless. It is covered with an abundance of herbaceous plants, the most widely represented families being the composite family (asters, golden rods, etc.), the rose family, the pea family, the grass family, and the sedge family, but the species representing them can hardly be said to be characteristic of the zone, as practically all of them are found in suitable localities farther west.

Second Prairie Steppe.—This central region extends westward from the first prairie steppe to a line running approximately from the international boundary at longitude 103° 30′ in a northwesterly direction to Battleford.

The flora is rather diversified and several very different plant associations are met with. In the north, where the prairie and the sub-arctic forest meet, the flora is composed of species characteristic of both zones, as is also the flora of the northern parts of the third prairie steppe. In the southwestern part of the second prairie steppe, i.e., the country southwest of the Moose mountain, in Saskatchewan, the vegetation is in many respects similar to that of the drier sections of the third prairie steppe. The grass is very short and the vegetation in general of a type adapted to regions with a scant precipitation. In places, large sandy tracts exist which are covered with a profusion of cactus, and in others there is no vegetation except that peculiar to arid land. Considerable broken or park-like country is found near the hills forming the boundary between the first and second prairie steppes,

and is also met with in the Qu'Appelle River valley and in other parts of the zone. Poplar and oak are the chief trees of the bluffs and the herbaceous vegetation, as may be expected, is made up of a mixture of prairie and woodland forms.

The major part of the second prairie steppe is true prairie, with no trees except in the river valleys. Shrubs occur, generally in low thickets or copses, and very frequently in small clumps composed of a single species. On the exposed prairie, where their growth always is stunted, snowberry, silver berry, buffalo berry, saskatoon, roses, and other species occur. In damp situations meadow sweet is met with, and in wet places, such as the borders of ponds and marshes, willows are abundant. The herbaceous vegetation varies somewhat with soil conditions but, taking the second prairie steppe as a whole, the numerous members of the pea family are perhaps the most characteristic flowering plants.

Third Prairie Steppe.—This region includes the rest of the prairie up to the foothills of the Rocky mountains. In its northern parts, i.e., north of lat. 52°, the flora is very similar to that of the second prairie steppe, but in the southern parts it is very different.

Except on Wood mountain and Cypress hills trees occur only along the borders of streams in the valleys, and the ponds, marshes, and lakes are not even fringed with shrubs. The rivers and creeks flow in deep, narrow valleys and the country is broken by coulees and low hills. The precipitation is scant and, as a result, the vegetation is often almost desert-like in character.

Large districts, especially in the Coteau de Missouri belt, are characterized by the absence of drainage valleys, the result being that the water in the lakes and ponds is generally saline and that numerous alkali flats occur. The vegetation in such situations is sparse and largely made up of plants especially fitted for soils rich in salt. Indeed, in these inland ponds and marshes, a number of plants thrive which normally occur in profusion on the shores of the Atlantic ocean.

The Rocky Mountains.—A great number of prairie species are found at considerable altitudes in the foothills of the Rocky mountains. On the other hand, a number of sub-alpine forms descend practically to the prairie, the result being that in the foothills, where the two types of vegetation intermingle, the flora is very rich in species. As the foothills and the lower slopes are ascended, prairie forms gradually disappear and are replaced by mountain species. Vegetation in general becomes more luxuriant in appearance, herbaceous plants grow taller, shrubs become an important feature in the flora, and finally real forests are reached.

In the well developed forests on the slopes the trees are largely coniferous, the principal ones being lodge-pole pine, whitebark pine, white spruce, balsam fir and highest up, larch. Shrubs are few in number, except in open and springy places, where bewildering thickets of many species of willows are found. The herbaceous vegetation is also rather scant, except along the edges, in open spaces, and along brooks and rivulets. In the dense forest, members of the blueberry and wintergreen families are conspicuous.

On the grassy slopes above the tree line the herbaceous vegetation again becomes very rich in species, exhibiting the richness and brilliancy of colour in the flowers so characteristic of alpine vegetation in general, until, just below the snow line, it takes on an appearance suggestive of arctic vegetation. In fact, many species occur on the higher levels in the Rockies which also have their homes in the arctic regions, a fact which may be satisfactorily explained, in the words of Darwin, as a result of conditions caused by the glacial period, as follows: "As the warmth returned (after the glaciation had reached its height) the arctic forms would retreat

northward, closely followed up in their retreat by the productions of the more temperate regions. And as the snow melted from the bases of mountains, the arctic forms would seize on the cleared and thawed ground, always ascending higher and higher, as the warmth increased, whilst their brethren were pursuing their northern journey. Hence, when the warmth had fully returned, the same arctic species, which had lately lived in a body together in the lowlands . . . . . would be left isolated on distant mountain summits (having been exterminated on all lesser heights) and in the arctic regions . . . . . "

The Selkirk Mountains.—While the Rockies may be looked upon as a chain of individual mountains, the Selkirk range has more the character of a high-level plateau. As a result there are real alpine meadows in the Selkirks whereas, in the Rockies, similar plant formations are generally met with on steep slopes. Differences in the vegetation of the Rockies and the Selkirks above the tree line are conspicuous and are due largely to the amount of precipitation, the Selkirks being favoured with a much more abundant moisture supply. For this reason the alpine meadow plant associations of the Selkirks extend almost to the snow line and, for the same reason, a number of high-alpine plants, which in the Rockies are characteristic of the bare peaks above the grassy slopes, are not met with at all in the Selkirks.

The Selkirk forest differs from that of the Rocky mountains with regard to composition, as far as the trees are concerned, the principal species being cedar, Douglas fir, hemlock, and Engelmann's spruce. The undergrowth on the mountains proper is quite similar to that of the Rocky mountain forest and, although more luxuriant, is not represented by many species. In the lower valleys, however, and on lower levels where the forest is more open in character, the shrubby as well as the herbaceous undergrowth is very different. Not only is it luxuriantly developed, but the species of which it is composed are of a different type. The Rocky mountain flora is disappearing, its place being taken to such an extent by Pacific coast species that the casual observer will find it rather difficult to detect any conspicuous difference between the flora of the Selkirk valleys and that of the coniferous forest of the Pacific coast.

The Coast Mountains.—Although having a large number of plant species in common with the Selkirks, the Coast range must be considered a distinct botanical zone, as many species occur there which are peculiar to this region alone.

Owing to the long growing season, the high average temperature and the abundance of the precipitation, the vegetation in the valleys and lowlands of the Coast range is almost sub-tropical in appearance. The trees, especially the cedar, the Douglas fir, and the spruce, reach gigantic dimensions, and the forest possesses a luxuriant undergrowth. In old, untouched forests, fallen trunks, shrubs, and herbs form an almost impenetrable tangle, especially where salal and devil's club are luxuriantly developed.

Trees characteristic of the valleys and the lowlands are the cedar, Douglas fir, Sitka spruce, hemlock, white fir, red alder, crabapple, broad-leaved maple, and cascara, while the characteristic shrubs include several species of willow, Oregon grape, species of currants and gooseberries, thimbleberry, salmonberry, roses, juneberry or saskatoon, devil's club, salal, blueberries, and red-fruited elder.

The herbaceous vegetation is very rich. Many species of beautiful ferns are abundant, and the grass vegetation, especially along the coast, is luxuriantly developed. Of other herbaceous plants may be mentioned skunk cabbage, tril-

lium, wild lily-of-the-valley, yellow pond lily, fringe-cup, false mitrewort, alum root, bleeding heart, goat's beard, twinflower and aster.

The major part of Vancouver island has a typical Coast Range flora. The southeastern section, however, has a vegetation of a quite different type. There, the growth is influenced by the comparatively scant precipitation, with little rain between spring and fall. As a result the spring vegetation is much more conspicuous than the summer and fall vegetation, especially on open and rocky land. In addition, the section is characterized by a number of species which are more or less of a Californian type and which occur nowhere else in Canada. Among the characteristic plants of this section of the island may be mentioned several species of brome grasses, camas, wild hyacinth, blue-eyed grass, spring-beauty, lupins, bird-foot clover, tall vetch, marsh hollyhock, godetia, arbutus or madrona, gilia, grove-lover, paint-brush, etc.

Dry Belts of British Columbia.—A few words may finally be said about the most important dry belts of British Columbia, including the Okanagan and the Kamloops districts. These regions, owing to the scant precipitation and to the nature of the soil, have a flora which strangely contrasts with that of the other parts of the British Columbia mainland.

In the dry belts two floristic subdivisions may be recognized, which, however, run more or less into each other and for this reason will not be dealt with separately. One subdivision is characterized by so-called bunch grasses, of which "wild rye" is the most conspicuous species, and is more or less destitute of forest-forming trees. The other floristic subdivision of the dry belts is more densely wooded, the characteristic tree of the forest being the yellow pine. On the whole, the dry belts may be said to be park-like in general character, with a rather desert-like ground vegetation.

V.—FAUNAS OF CANADA.[1]

Historical.—Whether the fauna of the western hemisphere was derived from that of the eastern, or *vice versa*, as is contended by various authorities, there is a close relationship between them. Geological evidence shows that in previous ages types now found in but one of the great continental circumpolar divisions were common to both. Old and now submerged land connections between the continents have been postulated both from zoological and geological evidence, and a more or less complete continuity of land throughout the northern hemisphere, in former times, must be acknowledged before present American biotal conditions can be thoroughly understood. That this connection was in the far north and in what is now arctic or sub-arctic climate did not prohibit a continual interchange of warmth-loving species, for the presence of coal in very high latitudes points to milder if not tropical or sub-tropical conditions where now we find perpetual snow and ice. One must, therefore, conceive of a pre-glacial time when tree-ferns and other luxuriant coal-producing forest types occupied extreme northern lands, and such animals as elephants, horses and other warmth-loving species could spread from one continent to the other.

This intercontinental connection must have been made and broken numbers of times by the recurrence of glacial periods which covered this country with ice

[1]Abridged from an article contributed to the 1921 Year Book by P. A. Taverner, Department of Mines, Ottawa.

to well south of the present Great Lakes and must at times have formed barriers more complete even than to-day to the passage of life across the far north. During these periods of alternate isolation and connection there was ample time and opportunity for wide divergence in development in the faunas of the separated land masses, the extinction of connecting links and the occurrence of many complexities to confuse the clear picture of the historical succession, until to-day we find a nearly identical circumpolar fauna at the north progressively breaking up and differentiating into peculiar and special New and Old World forms as it proceeds south.

The general trend of geographical distribution in Canada is from southeast to northwest. Ocean currents have much to do with this. Our east coast is chilled by the cold arctic current coming directly down from the polar ice fields through Davis strait, and the west coast is warmed by the grateful temperature of the great final sweep of the Japan current. When we realize that the barren Labrador coast is in almost the same latitude as southern British Columbia and is slightly south of the most southerly point of the British Isles, we can see what a fundamental influence these ocean currents have on the distribution of life upon our continent. Elevation also has a determining influence on climate and the distribution of animal life. It is well known that high mountains even in the tropics present arctic conditions at their peaks. Less elevation has similar effect in proportion to its height and often a rise of a few hundred feet will produce conditions that otherwise would only occur at considerable distance to the north. Not only do mountain ranges thus project long tongues of northern faunas into southern localities, but on the retreat of the ice at the end of glacial epochs they formed oases for the retreating cold-loving forms as they withdrew from the gradually warming lowlands. We thus have true arctic " relicts " of an ancient order isolated on mountain tops far from their natural habitats,—boreal islands in a sea of more southern life.

Zonal Distribution.—The general outline of zonal life distribution is well known, as is the fact that tropical life differs from temperate and from arctic. Close study, however, shows that besides these broad and obvious associations minor ones also exist. Various attempts have been made to map them out, and perhaps the most successful and generally accepted one for our purposes is that which divides North America into three regions, Boreal, Austral and Tropical, with the first two each divided into three life zones: the Arctic, Hudsonian and Canadian zones for the Boreal region and the Transition and Upper and Lower Austral zones for the Austral region. In Canada we have five of these zones represented— from the north the Arctic, Hudsonian, Canadian, Transition and Upper Austral. These extend across the continent, roughly agreeing with latitude, but thrown out of regularity, as previously indicated, by local conditions and agreeing closely with the mid-summer isotherms.

The Arctic zone is the so-called " barren land " of the far north, and includes all the islands and the north shore of the continent. The distinctive land mammals of this zone are the polar bear, musk ox, barren land caribou, arctic fox, arctic hare and lemming. Amongst the characteristic birds are snow buntings, ptarmigan, longspurs, snowy owl and gyrfalcons. This region is the great nesting ground for many of our waders and more northern ducks and geese, but few are residents as most forms migrate in winter.

The Hudsonian zone is the land of scrub forests, small stunted trees, mostly coniferous, and scattered dwarf willows and poplars. The southern boundary of this zone extends from the north shore of the gulf of St. Lawrence to near the mouth

of James bay, thence in a wavy curve to Great Slave lake where it drops south suddenly to a latitude about on line with the lower point of the Alaska Pan-handle, and thence to near the coast. It thus includes the southern Ungava peninsula, a narrow belt extending northwest from James bay, the Yukon, northern British Columbia and southern Alaska. It is penetrated from the north by the Arctic zone which persists on the mountains of the Yukon and from the south by the Canadian zone which follows up the valleys of the Mackenzie and Peace rivers. It is shut off from the sea on the Pacific side by the Alaska Pan-handle which has an intrusive Canadian fauna. On the other hand, it works down the Rocky mountains in a narrow band and scattered isolated spots across the United States boundary. This zone can be considered more as a transition between the Canadian and Arctic zones than a primary division itself. It contains species whose centres of abundance are on either hand and a few peculiar to it. Musk oxen, caribou and ptarmigan range into it in winter from the north, and it forms the extreme northern distribution of woodland caribou and moose. Its most characteristic birds are the rough-legged hawk, great-grey owl, northern shrike, pine grosbeak, white-winged cross-bill and fox sparrow.

The Canadian zone occupies the greater area of Canada and can be roughly defined as the coniferous forest belt. It includes practically all the remainder of the Dominion except the inner shores of the Nova Scotia peninsula, southern Ontario and Quebec in a narrow strip from about Montreal to just below Georgian bay on lake Huron, the prairies, a small irregular fringe along the Pacific coast opposite Vancouver island and a few mountain valleys penetrating the southern boundary of British Columbia. It penetrates the Hudsonian zone on the north along the valleys of the Mackenzie and Peace rivers and runs up most of the Alaska Pan-handle. The characteristic life is more numerous than in the preceding zones and includes the moose, woodland caribou, lynx, marten, porcupine, varying hare, white-throated sparrow, numerous warblers, olive-backed thrush, three-toed woodpeckers, pileated woodpecker, spruce grouse and Canada jay.

The Transition zone lies just along the southern border, including most of both shores of the bay of Fundy, a narrow belt following the north shores of lakes Ontario and Erie, all of the western prairies and intrusive valleys into the south of British Columbia and the shores of the strait of Georgia. The name Transition well describes its fauna. It contains comparatively few distinctive species, but in it many northern and southern forms meet. Its southern limit lies in the United States below, striking almost squarely across the continent on a line with the lower points of the Great Lakes, with excursions southward along the mountain ranges east and west and penetrated by extensions of the Upper Austral fauna along warm lowland valleys in the west. It forms the northern limit of range of the cottontail and jack-rabbits and the American elk, and is just touched upon by the varying hare from the north; the common mole of the south meets the star-nosed and Brewer's mole of the north and the wild cat partially replaces the Canada lynx. Amongst birds, the wild turkey, bob-white, two cuckoos, towhee, wood thrush and yellow-throated vireo are here at the northern limit of their ranges, and the Baltimore oriole, bluebird, catbird and bobolink overlap the solitary vireo and Wilson's thrush.

The Upper Austral zone in Canada is small in area, crossing our borders in a narrow shore belt along lake Erie, extending to the south side of lake Ontario and including the Niagara peninsula. It extends south as far as the northern borders

of the Gulf States, variously dotted and cut into by intrusive branches of the neighbouring faunas from either side, especially in the broken country of the west.

The opossum is perhaps the most distinctive of the mammals of the zone and among birds we have the yellow-breasted chat, mockingbird, Carolina wren, Carolina chickadee, orchard oriole, barn owl, a number of distinctive southern warblers and some southern subspecific forms allied to more northern variations.

These make the latitudinal or thermal divisions of our faunal life. Outside of the species mentioned are numerous forms that extend over the whole area, but show in different zones variations recognizable only to the expert. A good example is the hairy woodpecker. This bird breeds over all the wooded parts of North America, but the birds from the Lower Austral zone are quite separable by the trained eye from those of the Upper Austral and Transition and these from the large northern form of the Hudsonian. This is but one case of many where a northern and a southern race exist in the same species which are designated as subspecies. Some of these geographical races are so slightly differentiated as to require an expert to separate them while others are marked and striking. The critical difference between a full species and a subspecies is the fact that the latter intergrade and blend into each other gradually. With species the break between is sudden, and intermediates do not occur.

Further Divisions.—With this zonal distribution and a variation of life groups depending basically upon temperature, we have another system of distribution from east to west, depending largely upon physical conditions of habitat—the arrangement of land and water or mountain ranges forming barriers or highways of migration and leading certain forms in certain directions while barring them from others—and the comparative rainfall and humidity of climate. This has a primary direct influence upon such forms of life, as well as a secondary and indirect one through the plants and insects which give them food or shelter.

The principal east and west division is made by the Rocky mountains, which successfully cut off the Pacific coast from close contact with eastern forms. The Rocky mountain system approximates the dividing line of the east and west faunas, leaving a triangular patch to the west including British Columbia, southern Yukon and southern Alaska as the western or mountain fauna, and cutting through the Transition, Canadian and Hudsonian transcontinental zones.

The mountain district is characterized by an abundant rainfall, a high average humidity and a greatly diversified and rugged topography, forming a succession of parallel mountain ranges and valleys which facilitate intercommunication in a north and south direction, while obstructing it from east to west. These topographical conditions continue to the south well into Mexico and enforce migration routes and conditions and associations more or less isolated. The marked humidity of the climate, especially near the coast, also causes or encourages special physiological changes in numerous organisms tending as a rule to produce larger size and richer colouration. These differences in physical conditions and the isolation formed by the barrier mountains have produced a great number of forms peculiar to the district. In fact, comparatively few species, either of birds or animals, extend across the mountains from the east unmodified, and the native population can be divided into three heads: subspecific variations of eastern forms, species confined to the area and forms of evident mountain origin but spreading from them a certain distance eastward.

Typical amongst the first may be mentioned the moose and woodland caribou, the Oregon subspecies of the ruffed grouse, Harris' Rocky-mountain and Gairdner's

woodpeckers, northwest flicker, dusky and streaked horned larks, many forms of the warblers and sparrows and others. Of full species confined to this fauna are: Douglas squirrel, black-tailed deer, pika, yellow-bellied marmot, bushy-tailed wood rat, little striped skunk or spilogale, blue and Franklin's grouse, band-tailed pigeon, red-breasted and Williamson's sapsucker, Steller's jay, black and Vaux swift, black-chinned and rufous hummingbirds, Clark's nutcracker, northwestern crow, dipper, chesnut-backed chickadee, varied thrush and others. Forms typical of the mountains but spreading a little way east are: hoary marmot, mule deer, grizzly bear, red-naped sapsucker, Lewis's woodpecker, red-shafted flicker, Hammond's and Wright's flycatcher, black headed grosbeak and many more.

The Eastern fauna is comparatively homogeneous across the continent in a diagonal direction from Nova Scotia to Alaska, with but slight variation in physical aspect, except in the prairie region of the central west. In general the country is of low, even topography with good rainfall and is covered with a uniform forest of but little variety except that due to latitude and zonal distribution.

In the west it is penetrated by a great semicircular expansion of the Transition zone, extending from the eastern Manitoban line along the international boundary to the mountains and north to Edmonton and Prince Albert, and characterized by great dryness, near-desert conditions and an almost entire absence of trees.

The general tendency of this prairie fauna is towards small size and pale, bleached colouration. Species characteristic of it are the prong-horn antelope, bison, coyote, gopher, prairie chicken, sage hen, burrowing owl, Leconte's sparrow, and lark bunting, whose open country requirements debar them from wooded land. The remainder of its fauna is similar to that of the eastern country but generally subspecifically differentiated from it through the dryer climate and desert-like conditions. Some species included in this division are western horned owl, Say's phoebe, desert horned lark, pale goldfinch, western clay-coloured sparrow, Dakota song sparrow, prairie marsh wren, etc.

True Eastern fauna, through generally similar from the far northwest to the Atlantic coast, does show a slight tendency to variation north of these plains, but the influence is slight and in broad treatment may be disregarded. Many species extend unmodified throughout the area, or when modification occurs it can usually be attributed to either thermal differences or the influence of the closely allied neighbouring prairie forms with which it comes in contact in migration. In general most of the subspecific forms mentioned as prairie or western are represented by type subspecies in this great eastern fauna, which is perhaps the most typical of Canada and gives distinctive character to our biotal resources.

VI.—THE NATURAL RESOURCES OF CANADA.

The economic life of new countries must at first depend entirely, and later, mainly upon their natural resources. Older countries, after exhausting their most easily obtained resources, turn for a livelihood to manufacturing and similar pursuits, conserving their own resources and utilizing those of less developed areas. Canada is distinctly a new country, the resources of which are but now commencing to be appreciated; in recent years numerous surveys and investigations as to their extent and value have been made. A short summary of important details regarding

them follows. Fuller information will be found in the introductions to the later sections—Agriculture, Furs, Fisheries, Forestry, Minerals, Water Powers—of this volume.

Agricultural Lands.—Of the total land area of the nine provinces (1,401,316,413 acres) it is estimated that approximately 440,951,000 acres are available for use in agricultural production. The area now under cultivation is but a fraction of this total, that under field crops in 1921 being 59,635,346 acres. The area under pasture in the same year in all the provinces except Manitoba and Alberta was 9,977,204 acres. These figures are exclusive of the Yukon and the Northwest Territories, where certain of the more hardy crops have been grown and where stock raising is possible. Farm lands of almost unlimited extent are to be had in all parts of the Dominion, and are among the most productive in the world. In 1923 Canada was the world's leading exporter of wheat, while in the export of other grains she also occupied a prominent place. Fruit culture is carried on in the Maritime Provinces, in southern Ontario and in British Columbia, under favourable conditions of soil and climate. Stock raising is a flourishing pursuit on the prairies, while mixed and dairy farming proves profitable throughout the whole country.

Furs.—Canada is one of the world's greatest fur producers. As early as 1676, Canadian furs sold in England were valued at £19,500. Since that time vast areas of our northern territory have been exploited by hunter and trapper, the vast expanses of northern Quebec and Ontario and the Northwest Territories furnishing subsistence for many of the most highly prized fur-bearing animals, among the most important of which are the beaver, fisher, various varieties of foxes, marten, otter and many others of less commercial value. The successful breeding of the fox on fur farms came in the period of rising prices after 1890. Other animals also have been domesticated, though less successfully than the fox—raccoon, mink, marten, otter, skunk, muskrat and beaver. During the year 1921-22 the value of pelts purchased by traders from trappers in Canada amounted to $17,438,867. Pelts sold from fur farms in the calendar year 1921 were valued at $626,900, and animals sold at $690,566.

Forests.—Among the most notable of all Canadian natural resources are those of the forests. From the days when early French settlers established ship-building yards along the St. Lawrence up to the present, when our forests supply millions of tons of pulp, paper, and other wood products yearly, these resources have been of immense value, not only to Canada but to the Empire. Canada's forest areas may be stated as follows:—(1) the great fir forest of the Rocky mountains and Pacific coast, (2) the northern coniferous forest stretching in a wide curve from the Yukon, north of the Great Lakes to Labrador, and (3) the deciduous hardwood forest, extending from lake Huron through southern Ontario and Quebec to New Brunswick and the Atlantic coast. Estimates have placed the extent of timber lands in the Dominion at 932,416 square miles, of which 390,625 are covered with saw timber of commercial size, and the remainder with pulpwood. Next to Russia and the United States our resources are the most important in the world, in quality as well as in extent. The strength and durability of many of the woods of British Columbia place them amongst the most valuable in commercial use, while pulp woods from limits in eastern Canada are of equally high grade. Statistics of the total value of forest production in 1920 place it at $315,902,193. The value of pulp and paper products alone in 1922 was $155,785,388 ($236,420,176 in 1920).

Fisheries.—The first of Canada's resources to be exploited by Europeans was the fishing banks of the Atlantic coast. It is believed that for many years before the actual discovery and settlement of North America the cod-banks south of Newfoundland and east of Nova Scotia had attracted French fishermen by their abundant catches. These fishing grounds alone extend along a coast line of more than 5,000 miles, comprising an area of not less than 200,000 square miles, where many of the world's most valuable food fishes are caught. Other fishing grounds include the inshore expanses of the St. Lawrence, the Great Lakes and innumerable other inland water areas, Hudson bay with a shore line of 6,000 miles and the Pacific coast, with its inland salmon fisheries and over 7,000 miles of well-protected shore. The value of Canadian fish products in 1918 (the record year) reached $60,250,544.

Minerals.—The numerous and varied mineral deposits of the Dominion form another of her most important resources. Their value was first appreciated early in the 17th century, when iron was mined in Cape Breton. Following a development which has only become an important one during recent years, when the needs of manufacturing industries and a more settled civilization were to be met, Canada has now become one of the important mining countries of the world. Her coal resources are only now being exploited to any considerable extent, the estimated total reserves available amounting to 1,234,269,310,000 metric tons, approximately one-sixth's of the world reserve; over 85 per cent of the Canadian reserves are in Alberta. The total estimated reserves constitute almost one quarter of the total amount of coal available in North and South America. Extensive oil fields exist in the western provinces, where they remain practically undeveloped. Some smaller fields in Ontario have been exploited, while oil shale occurs in several parts of eastern Canada. In the production of natural gas, Canada holds second place among the countries of the world. Nickel deposits at Sudbury, Ontario, are as large as all others in the world combined, and produce six-sevenths of the world total. Copper deposits in the same area and in Manitoba, while not of great extent, still assure the maintenance and possible increase of the present rate of production. Arsenic in large quantities is a by-product obtained in the smelting of Ontario silver ores of the Cobalt and Porcupine districts, where the latter are found in large quantities. Gold, of which Canada was in 1921 the world's third largest producer, is also found in the same region, in British Columbia and in the Yukon. Canada is the second largest producer of magnesite and the third largest producer of mica in the world. Large iron deposits, although of a low grade, are found in the district north of Lake Superior. The asbestos deposits of southern Quebec are unrivalled in the production of this mineral. The total value of mineral production in Canada during 1922 was $184,297,242.

Water Powers.—Canada's water area of 126,329 square miles, distributed as it is throughout all parts of the country, provides a large amount of potential electric energy. It is estimated that 18,255,316 horse power are available at a minimum yearly flow, 32,075,998 at maximum flow and that a turbine installation of 41,700,000 horse power is available. Present turbine installation is set at 2,973,759 horse power or only 7 p.c. of the possible amount.

VII.—CLIMATE AND METEOROLOGY.

1.—The Factors which Control Canadian Weather.[1]

Several prime factors play important rôles in establishing climatic types, latitude, distance from the sea (especially on the western side of the continents), altitude, and prevailing winds, the last named being a variable, accounting for differences in the character of corresponding seasons in different years.

Canada, with her huge area, has a wide range of climatic types, varying between temperate and arctic, and between marine and semi-arid. No country, however, has a climate altogether independent of the rest of the world; the atmosphere knows no political boundaries, but moves in accordance with physical laws.

Prevailing Winds due to Inequality of Atmospheric Pressure.—Meteorological research has shown that the earth's atmosphere is not spread uniformly over its surface, and that certain regions exist where the atmospheric pressure is either higher or lower than the general average the year round, and other regions where it changes with the seasons, The winds are the outcome of the tendency to establish an equilibrium, which, however, is never attained. This general circulation of the atmosphere is withal a mechanism of marvellous beauty and intricacy, which, owing to causes yet imperfectly understood, is subject to many variations.

The most persistent and relatively unvarying feature of atmospheric distribution is a belt of high pressure between latitudes 30° and 40° in the southern hemisphere. Its partial counterpart exists in the northern hemisphere, but is there subject to greater changes, which without doubt, result from the larger land areas in the north. Between these two belts of high pressure is a belt of relatively low pressure over the equatorial regions. To this distribution, with certain other factors, is due the system of trade winds, the northeast and southeast trades. Towards higher latitudes beyond 40° in both hemispheres, there is a tendency towards a gradual diminution of pressure, and westerly winds prevail in the middle and even higher latitudes.

Unequal Heating of Land and Water.—The physical properties of land and water, as regards temperature, play an important rôle. The earth receives almost all its heat from the sun, and the character of the surface on which it falls plays a very important rôle in determining climatic differences. Water has a large capacity for heat and, being a fluid, is mixed by the winds and kept fairly uniform in temperature to considerable depths. Thus the sun's heat warms the oceans very slowly, and for the same reason the oceans cool very slowly. On the other hand, the same solar heat warms a mass of land more rapidly than the same mass of water in the ocean, and moreover the sun's heat is all absorbed in the surface layers of the land, which thus become very hot; similarly, when the sun is withdrawn, the land surface cools very rapidly. The result of these physical facts is that the northern portions of the continents of the northern hemisphere become very cold in winter, while the oceans in corresponding latitudes remain warm, and as cooling of the lower strata of the atmosphere, resting over the lands, leads to contraction, the pressure becomes higher over the continents than over the seas, and consequently, the tendency is for air to move from land to sea during the winter, while in summer, when all the continents become warmer than the oceans, the reverse holds. But the winter effect of contracting atmospheric lower strata is in operation

[1]Contributed by Sir Frederick Stupart, Director of the Meteorological Service of Canada.

more or less throughout the year over the ice covered arctic seas, and over Greenland, with the result that in summer the barometric pressure is a little higher in the polar regions than in the middle latitudes.

Cyclones and Anticyclones.—This general average distribution of pressure has an important bearing on Canadian weather. Another important factor to be considered, is the influence of anticylonic and cyclonic areas. We have mentioned the west to east drift of the air over the middle latitudes, and it is within and more frequently towards the northern limit of this drift, that the phenomena of the travelling anticyclone and cyclone are found. The anticyclonic area is a disturbance in the general drift of the atmosphere, usually of enormous extent, within which the air is moving spirally outwards from the higher to the lower pressure. Within this region the weather is generally fine and settled. The cyclonic area is also a disturbance, varying from a few hundred to more than fifteen hundred miles in diameter. It may be elliptical or circular or very irregular in form, and within its boundaries the air is moving inwards from a higher to a lower pressure. This is the region of unsettled and stormy weather.

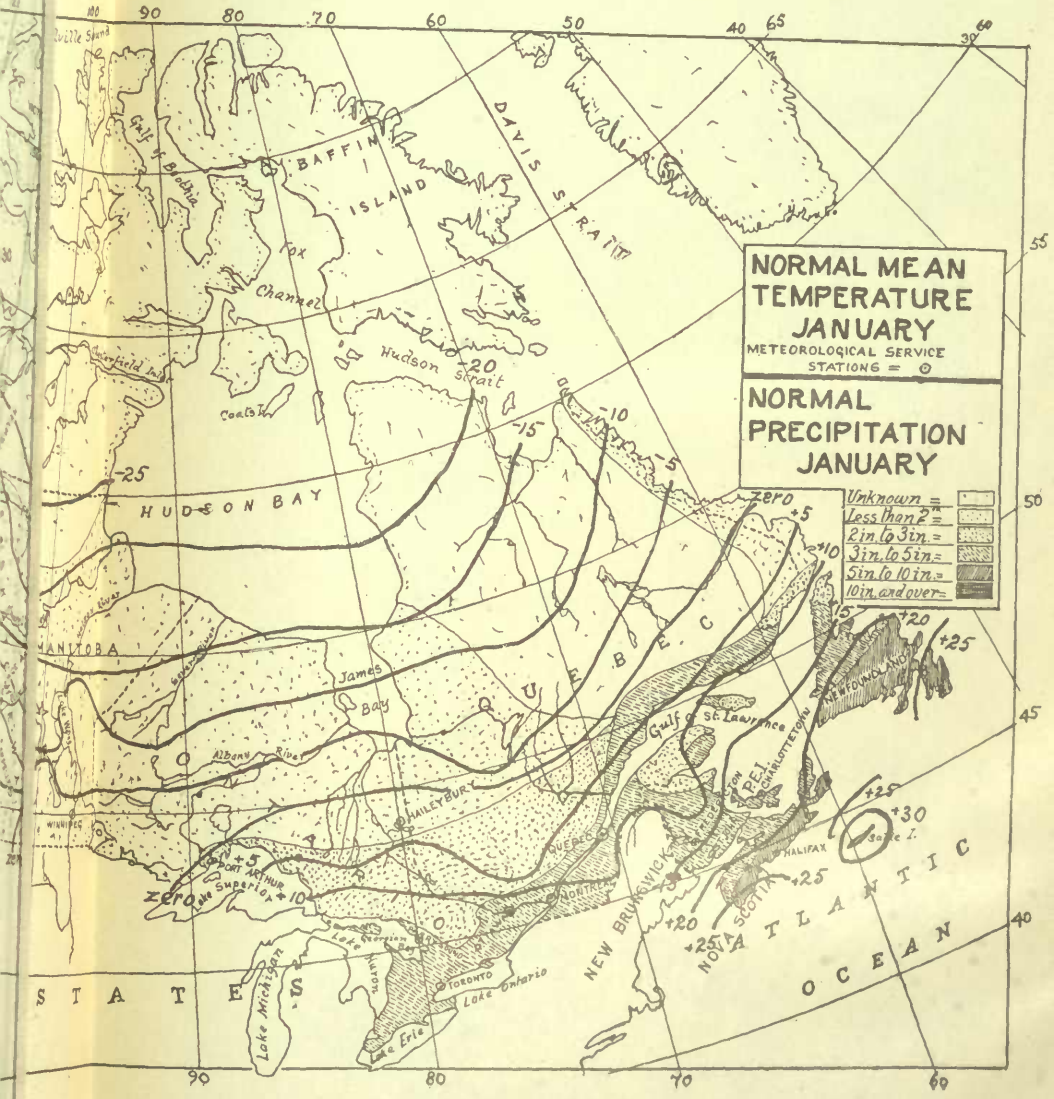
The anticyclones and cyclones, designated as areas of high and low pressure, or more shortly as highs and lows, pass across the North American continent in constant procession from west to east at velocities averaging 20 miles in summer and 30 miles in winter. The highs, especially those first appearing in the more northern regions, have a tendency towards a southeastward course, while the majority of the lows have a more directly eastward movement, the mean average track being from British Columbia to the Great Lakes and thence to Newfoundland. It is the passage of these high and low areas which brings to us the changing winds and weather; warm showery weather being associated with the lows, and fair, cool or cold weather, according to the season, with the highs. As example: the barometer is high, in say, Ottawa and Toronto, and begins to fall as a low approaches lake Michigan, the wind sets in from the east or southeast and cloudiness increases, and within twelve hours conditions are more or less favourable for rain. Rain falls continuously when warm, moist, expanding and hence cooling air is passing slantingly upward over a barrier of relatively cold air, and these conditions are frequently found in advance of the low, more especially in the colder seasons, and occasionally in summer, But in summer it is more often that the rain partakes rather of the character of showers, perhaps with thunder, and this occurs when, with the heating of the land, upward moving, convectional, and hence rapidly cooling currents, become prevalent. It is often thought that if only water vapour in the cloud would fall as rain, it would be sufficient for all purposes, but this is not so; the actual amount of water in the cloud is not much greater than is often obtained in a heavy dew. Before an abundance of rain can be obtained, it is necessary to feed the cloud with a copious supply of water vapour. This supply is obtained when the centre or trough of lowest pressure approaches the place of observation, and the rain usually becomes heavier, and as it passes, the wind shifts to the northwest, not infrequently with a squall, and the barometer begins to rise in advance of an oncoming area of high pressure, accompanied by clearing weather. Such is an ordinary sequence of events over the larger portion of Canada.

Effect of Topography on Climate.—The topography of a country, however, exercises an important influence on weather conditions, and there are many parts of Ontario, to say nothing for the moment of British Columbia, where, owing to topographical features, considerable rain or snow may fall with westerly winds,

MAP OF CANADA SHOWING N[illegible]AL MEAN T[illegible]

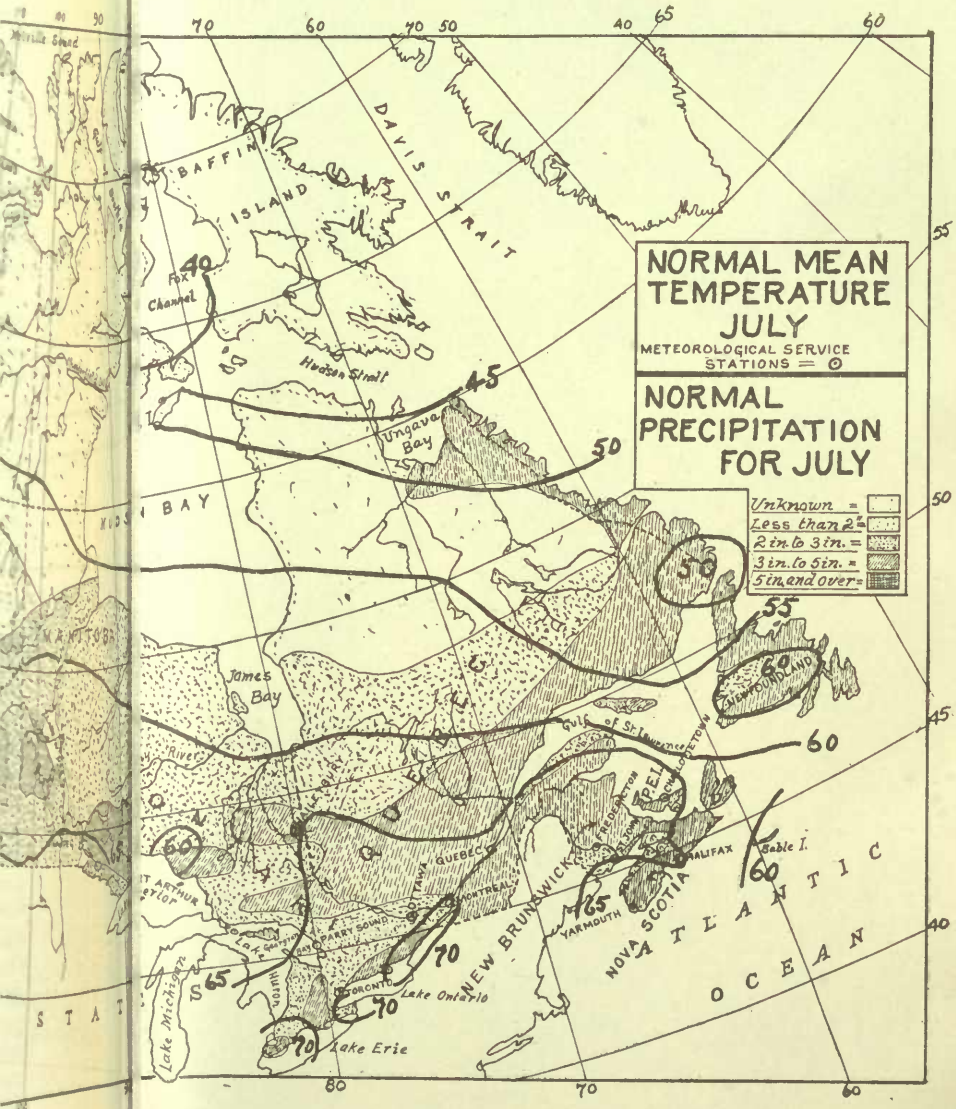
To face p. 40.

MEAN TEMPERATURE AND PRECIPITATION IN JANUARY.



MAP OF CANADA SHOWING NORMAL MEAN

To face p. 40.


NORMAL MEAN TEMPERATURE JULY
METEOROLOGICAL SERVICE STATIONS = ⊙
NORMAL PRECIPITATION FOR JULY
Unknown =
Less than 2" =
2 in. to 3 in. =
3 in. to 5 in. =
5 in. and over =
BAFFIN ISLAND
DAVIS STRAIT
Fox Channel
Hudson Strait
Ungava Bay
James Bay
HUDSON BAY
Gulf of St. Lawrence
NEWFOUNDLAND
P.E.I.
NEW BRUNSWICK
NOVA SCOTIA
Sable I.
HALIFAX
YARMOUTH
ATLANTIC OCEAN
QUEBEC
OTTAWA
MONTREAL
TORONTO
PARRY SOUND
Lake Ontario
Lake Erie
Lake Michigan
Lake Superior
40
45
50
55
60
65
70
80

NORMAL MEAN
TEMPERATURE
FOR JULY
NORMAL
PRECIPITATION
FOR JULY

when the barometer is rising behind a retreating low area. Immediately to the east of lake Huron and Georgian bay the land rises rather abruptly over 1,000 feet; westerly winds off the lake are deflected upwards by the increasing height of the land, and the air, expanding as it rises, is cooled below the dew point, with resulting precipitation. Hence it is that the snowfall in Grey, Bruce and neighbouring counties is greater than in the counties to the south and east, where the land falls away in elevation. This topographical effect is more general and more pronounced in British Columbia, where, in winter, the mean temperature of the sea is warmer than the land. The air coming eastward from the Pacific rises up the western slopes of the mountain ranges, and the cooling effect of expansion leads to very heavy rains on the outer coastline with lighter but still heavy rains on the lower mainland.

Climatic Features of the Canadian Provinces.—There are very interesting climatic features peculiar to each of the Canadian provinces. Beginning in the far west, the most striking feature is the mildness of the climate near the Pacific coast, where the controlling influence is the prevailing westerly winds which bring the warm moist air from the Pacific. In addition to this, when winds are northerly and easterly the air is being drawn from higher to lower levels, and is thus gradually warmed as the atmospheric pressure increases towards sea level. It is also due to this latter cause that the cold spells near the coast are never severe. Another feature is the seasonal character of the rainfalls. During the colder months of the year it is heavy while in summer it is very light. In the cold months, Pacific air, on reaching the continent, is cooled both by passing over a relatively cold land, and also a land with rapidly increasing elevation. In summer, on the contrary, the sea air is colder than the land, and it is only occasionally, even at high levels, that it is cooled below the dew point, hence the deficiency of rain during June, July and August. Another factor which plays an important rôle in British Columbia is the anticyclone moving southward from the Yukon. It is at such times that the severe east and northeast snowstorms occur in the mountains.

A problem which is receiving much attention is that of the precipitation of the western provinces. It has not yet been definitely decided whence comes the moisture which falls in summer rains, but from recent investigation it would appear that the greater part is from the gulf of Mexico, though a certain proportion comes across the mountains south of Canada from the Pacific. The variation from season to season is certainly closely connected with the distribution of atmospheric pressure over other parts of the continent. It is surmised that a cold spring, following a cold winter with an abnormal accumulation of snow and ice in northeastern Canada, including Hudson bay, is usually there followed by a rather persistent abnormally high barometer, which in turn leads to a prevalence of east and northeast winds over the northern portion of the Great Lakes, and thence westward to the Canadian prairies, while over the northwestern portions of the continent, the pressure is relatively low. The stream lines of the warm lower atmosphere in the Mississippi valley will then be from the southeast, converging towards colder east and northeast winds, and gradually rising above them. With such conditions, which are strikingly like those which have prevailed this past spring, copious rains are likely to occur in the western Canadian provinces. When, in other seasons, a series of lows pass eastward across the Great Lakes, the resultant stream lines in western Canada will be southwest and west and the rainfall west of the Great Lakes will be light.

A factor which plays an important rôle in determining the character of western winters is the intensity of the anticyclones and the latitude in which they first

appear. The weather chart of the northern hemisphere between longitude 40° E. and 180° W., now prepared daily, includes data both from Alaska and from the sub-arctic portions of the north Atlantic, and there is a growing conviction that the pressure distribution in northwestern America in winter depends largely on the position and the intensity of the normal area of low pressure over the north Pacific, which is the resultant of the persistent development of deep cyclonic areas.

In some seasons these cyclonic areas enter the continent very far north, and appear actually to prevent the formation of the anticyclones, which are so intimately associated with great cold waves, and in such seasons, comparatively mild or even very mild winters prevail in the western provinces, the general flow of air being from the south and west. In other seasons, the Pacific cyclonic areas develop farther south, and enter the continent over British Columbia, and then great anticyclones, accompanied by intense cold, develop in the Mackenzie River valley and Yukon, and sweep southeastward towards the Great Lakes and eastern Canada. One of the problems then to be solved has relation to the factors governing cyclonic development in the higher latitudes over the ocean, and one wonders whether a varying solar radiation may not cause changes in the barometric distribution in the tropics, which will affect the strength of the trade winds and which will in turn lead to variations in the great ocean currents, and then, according as the warm waters are abnormally far north or far south, the Pacific centre of action will also vary. The solution of such a problem may ultimately lead to the possibility of forecasting the character of coming winters.

Canadian territory stretches northward beyond the arctic circle, from lands in the western provinces, where cereal crops are an assured success, to the barren lands where only mosses and lichen grow. A question of moment then, is how far north the lands of agricultural possibilities extend. Certainly, between the two limits, there is a wide zone, in the southern portion of which crops will in most years mature, and in the northern portion of which they will only very occasionally ripen. Throughout all this vast doubtful area, the factor of long summer sunlight plays an important rôle, and lengthens the period of growth, but another factor, acting adversely, is the liability of early and late summer frosts, and the husbandman who sees his crops rapidly maturing is not unlikely to see them destroyed in August before ready for harvest. Graphs showing summer temperature curves at various stations show how in August the downward trend of the curve is very rapid at the more northern stations.

The southern portions of Ontario, enjoy a particularly favourable climate, partly owing to their being farther south than other portions of the Dominion. The most southerly point in Ontario is in the same latitude as Rome and Toronto is in the same latitude as Florence. The Great Lakes also exert an important influence in tempering the cold of winter and moderating the heat of summer, and undoubtedly have some influence in equalizing the precipitation, periods of drought there being less frequent than in corresponding latitudes to the west.

The enormous territory included in northern Ontario and Quebec, north of a line passing through Quebec city, enjoys a fairly warm summer, and it is only as autumn advances that a marked difference of temperature is registered between these districts and those farther south. It is not latitude alone which leads to the shorter growing season and more severe winters in these northern parts, but rather the fact that the mean path of cyclonic depression lies in the valley of the St. Lawrence to the south.

In the southern portions of Ontario and Quebec the winds connected with cyclonic circulation commonly veer from east through south to west, while in the north they back through northeast to northwest and it is only occasionally that the warmer air of the south is wafted northward. This of course, leads to a steadier and more intense cold in winter, and, as this whole northern region has a fairly heavy precipitation, the snow lies deep in winter and does not disappear until quite late in the spring. It is practically certain that deforestation will not appreciably affect this northern climate, the causes which lead to existing conditions being the result of a world wide atmospheric circulation.

The weather types peculiar to the Maritime provinces are likewise largely controlled by factors apart from latitude (which is lower than that of Great Britain). Nova Scotia and New Brunswick lie near the eastern coast line of America, and hence are affected at intervals by the cold waves coming from the interior of the continent. Then again the mean path of lows is directly over the northern part of the gulf of St. Lawrence, hence conditions associated with cyclonic areas are of frequent occurrence. These conditions are accentuated by the fact that many storms, especially in winter, develop near the Atlantic coast between the Gulf Stream and the cold land, and, moving northeastward, cause gales and bring precipitation in the Maritime provinces and Newfoundland.

2.—The Climate of Canada since Confederation.

Under the above heading Sir Frederick Stupart, Director of the Meteorological Service of Canada, contributed a short article, which for reasons of space is not reprinted here, to the 1921 edition of the Year Book (pp. 169-173); to it the interested reader is referred.

3.—The Meteorological Service of Canada.[1]

In order to secure information regarding the climate of Canada in the 17th and 18th centuries, the "Relations of the Jesuits" have been carefully examined and the references to climatic phenomena collated under such headings as "winter", "summer", "drought", etc. From these notes it has been possible, in spite of the total lack of instrumental records, to arrive at certain conclusions regarding the general character of the Canadian climate in these early days. Broadly speaking, that climate was then very much the same as it is now.

Some of the earliest instrumental meteorological records of the Canadian climate appear to have been made by Mr. Thomas Hutchins, an officer of the Hudson's Bay Company at York Factory and Severn House, in 1773, and it is believed that there are several other records by officers of the company in the archives of the Royal Society in London.

Investigation of old provincial records has further shown that, during the early part of the 19th century, several individuals in Ontario, Quebec and the Maritime provinces kept meteorological records which it would be quite possible to bring together and publish; however, owing to their fragmentary character, it is unlikely that they would prove of any great value. Perhaps the most indefatigable among observers prior to 1840 was the Rev. Mr. Dade, who has bequeathed us a record extending over many years.

[1]Contributed by Sir Frederick Stupart, Director of the Meteorological Service of Canada.

Establishment of Magnetical and Meteorological Observatory.—It was not, however, until the British government established a Magnetical and Meteorological Observatory in Toronto, that meteorological observations were begun on a basis which promised continuity and scientific precision. The first observatory building was erected under the direction of Lieutenant Riddell, R.A. It was of logs, rough cast on the outside and plastered on the inside, and was completed during the summer of 1840, magnetical and meteorological observations being begun in September of that year. Lieutenant Riddell returned to England in the spring of 1841, and Captain, afterwards General, Sir Henry Lefroy, who had established an observatory of a similar character in St. Helena, was transferred to Toronto, in order that he might undertake a magnetic survey of British North America. Captain Lefroy remained as director of the observatory until, in the spring of 1853, it ceased to be an Imperial establishment.

Upon the transfer of the observatory to the Government of Canada, arrangements were made for retaining the military observers, and the institution was placed under the direction of Professor Cherriman, professor of mathematics and natural philosophy in the university of Toronto, who continued in charge for two years. During this period a stone observatory was erected on the exact site of the old frame building, the pillars on which the magnetic instruments were placed being left standing and the walls built around them. Presumably there was no change in the position of the meteorological instruments.

In 1855 Professor G. T. Kingston, M.A. was appointed director of the observatory. For about ten years he apparently confined his attention almost exclusively to magnetic work and the local meteorology, but it is quite obvious from correspondence and the various reports made by him to the Government that for some years prior to 1870 he had been considering the possibility of inaugurating a Meteorological Service in Canada along much the same lines as those then existing in Great Britain and the United States. In 1869 he addressed himself by letter and circular to persons actually engaged in meteorology, including the principals of several grammar schools, who for several years had acted as observers, and others who were interested in this movement, requesting their co-operation. The result was a steady increase in the number of observers, who now with unity of purpose and action made systematic and similar observations in different portions of the Dominion.

From October, 1869, to the spring of 1871, meteorological work in Canada was carried on by purely voluntary organization; no emoluments whatever were attached to the services of the observers, and the instruments were provided from private sources or lent from the Magnetic Observatory, Toronto, which also furnished the forms for registration. The work connected with organizing new stations and discussing and compiling returns was also gratuitously performed by the director and assistants of the observatory. Professor Kingston received much assistance from a few persons in the various provinces who recognized the usefulness of the proposed work. Among these were the late Archbishop Machray, of Rupert's Land, the late F. Allison, M.A., of Halifax, the late H. J. Cundall, C.E., of Prince Edward Island, and Captain Ashe, R.N., of Quebec. In more recent years Mr. E. Baynes Reed proved a most valuable officer of the service.

In the spring of 1871, a grant of $5,000 made by the Dominion Government for the promotion of meteorological research gave considerable impetus to the movement. The preparation of a daily synchronous weather chart was begun in 1873, but the information received in Toronto was quite inadequate to admit of daily forecasts and the issue of storm warnings. However, through the courtesy

and goodwill of the Chief Signal Officer at Washington, warnings of expected storms in Canada were sent to Toronto, and thence forwarded to the various districts likely to be affected. By 1876 there were 15 stations in Canada reporting three times daily to Toronto, and reports from upwards of 50 American stations were also received at the observatory. Also the storm signal display stations had by this time been increased to 37, and observing stations of all classes numbered 115. Forecasts were first issued during the summer of this year, a chart of the weather with the probabilities for the ensuing 24 hours being prepared each morning at 10 o'clock and furnished to the Marine Exchange Board in Toronto for public inspection. After September 1, warnings were issued from the observatory without waiting for advice from Washington, and in October the daily forecasts were first printed in the Toronto evening papers.

The Meteorological Service was now completely established, and during the 45 years which have since elapsed, its growth has been steady, and its activities have greatly increased. At the time of writing (July, 1923) there are 686 observing stations, the records of which are published regularly in the "Monthly Record". The majority of these stations are necessarily in the more southern portions of the Dominion, but there are several stations in the Peace River district, at intervals in the Mackenzie River basin, between lake Athabaska and the Arctic sea, along the shores of Hudson bay and in the Yukon.

Publications of the Meteorological Service.—The "Monthly Record", which began as a two page issue in January 1877, is now a volume of 82 pages, including two maps, showing the distribution of precipitation and the temperature values and their departure from normal. A thirteenth number is published each year, containing the reports of stations received too late for the monthly issue, among which are usually those from the far north. From the inception of the Service until 1916, an annual Climatological Report was published, but the Monthly Records, with the supplement, bound together, now constitute the Annual Climatological Report of Canada.

In addition to the Monthly Record there is published within a week a meteorological map for the month just closed, showing the distribution of rainfall over the Dominion, the temperature and departure from normal, and also fairly comprehensive notes descriptive of the prevailing weather and the condition of vegetation, or in winter of the depth of snow and thickness of ice.

A Climatology of the Dominion is in progress. Parts I and II, covering British Columbia and the western provinces, have been published. Part III, for the province of Ontario, will shortly be sent to the printers and the part covering Quebec and the Maritime provinces will soon be ready.

A brochure containing the Meteorological Report of the Toronto Observatory has been published annually for over 60 years.

Weather Forecasting Service.—The particular work which brings the service most closely into the public eye is weather forecasting. Forecasts are issued from the central office, Toronto, for all parts of the Dominion east of the Rocky mountains, and from Victoria for British Columbia.

For the purposes of the weather map, on which forecasts are based, two daily reports, 8 a.m. and 8 p.m. Eastern standard time, are telegraphed to the central office, in Toronto from 39 stations in Canada, from 5 in Newfoundland and from Bermuda. Most of these reports are immediately forwarded to Washington, while Toronto receives about 100 similar reports from stations in the United States. Each report includes the reading of the barometer reduced to sea level, the tem-

perature, the direction and velocity of the wind, and precipitation, if any. All these reports having been entered in a map of North America, lines called isobars connecting places with the same barometric pressure, are drawn and show graphically the distribution of pressure; the areas of high and low pressure are thus clearly marked out. Noting the movements of these areas as shown by previous maps, the forecasting official, from long experience, and a knowledge of many of the physical laws which govern atmospheric phenomena, is able to judge of changes likely to occur over subsequent periods of from one to several days.

Supplementary to this weather chart of America, a chart is also prepared daily containing reports from Europe and Alaska, and also from the Azores and several sub-arctic stations in the North Atlantic. This chart is very helpful, showing as it does how intimately connected are the changes in all parts of the globe.

The weather forecasts are issued twice daily, namely at 10 a.m. and 10 p.m. and are usually in both instances for the ensuing 36 hours. At times the forecast is more extended, but there is no regular issue covering a longer period. The general means of disseminating the forecasts is by telegraph, and arrangements exist whereby every telegraph office in Canada should receive them without delay.

In many parts of the Dominion, a copy of the forenoon forecast is supplied to central telephone offices and furnished to rural subscribers and shipping people when asked for. The forecasts are also broadcasted from all the government wireless stations for the benefit of shipping near the Atlantic coast and on the Great Lakes.

In addition to the regular bi-daily issue of forecasts, special warnings of expected gales are telegraphed to agents at over 100 ports, where storm signals are displayed, and special notice is telegraphed to the railways when snowstorms and drifts are expected.

The daily weather map is printed each morning in the Toronto and Winnipeg offices, and several hundred copies are distributed to commercial companies, insurance companies, railways, and many other business concerns. In addition a large number of public schools and high schools receive the map, and as a result, a good knowledge of atmospheric changes is not uncommon among teachers, who, it is found, take pleasure in explaining the maps to their pupils.

A very similar weather map is prepared at Victoria Meteorological Office, whence forecasts are issued for British Columbia and the sea routes adjacent thereto.

Meteorological Research.—Since research is essential to the life and progress of meteorology, a trained physicist and assistants are included in the staff of the central office. Meteorological research includes a scientific study of the earth's atmosphere and its circulation, and in view of this, increasing attention is devoted to exploration by balloons carrying self-recording instruments. Results are co-ordinated with those obtained in other countries by the same means. Further, as it it is probable that variation in the temperature and the position of the great ocean currents are factors intimately connected with prevailing winds and climatic control, transoceanic steamships are being equipped with thermometers for continuously registering the water temperature. The study of solar radiation and atmospheric electricity is not neglected.

A subject which receives very serious attention is that of agricultural meteorology, which is concerned with the effect of weather changes on the growth, yield and quality of crops, more especially as this effect is modified by various methods of cultivation. Data for the determination of the epochs of wheat growth are now collected by the Dominion Bureau of Statistics for the use of this Branch, and

special experiments are conducted by the Dominion Experimental Stations. Use is also made of the statistics which are published in earlier years, by co-ordinating the times of growth with the meteorological observations of these years. This branch is in the development stage and will have to create its own observational material in the future, since the work accomplished to date has shown that the statistics of earlier years were not gathered with sufficient attention to detail to permit of the rigid analysis which the nature of the work demands.

Some preliminary notice of the work on wheat has been published as well as an article on the suitability of the climate of various districts in Canada for the production of sugar from the sugar beet. Work on oats, wheat and potatoes is progressing.

Magnetic Observatories.—The Magnetic Observatory which, as already stated, was established in 1840, was, on the recommendation of the present director of the Meteorological Service, removed to the village of Agincourt, 14 miles distant from Toronto, since it was found that the electrical development of railways and light was impairing the records. The work of observation has, however, been carried on without intermission and with increased equipment at the new site as a branch of the Meteorological Service, so that from 1840 to the present time there has been an uninterrupted record of changes in terrestrial magnetism—one of the longest and most valuable records in the world. At this observatory, all the compasses attached to the theodolites of the Dominion Land Survey are annually adjusted, and the magnetic instruments used by the Dominion Observatory are here standardized. Another Magnetic Observatory was established near Athabaska Landing, Alberta, in 1916, and a continuous record of the magnetic declination has since been obtained there, data very necessary to the Dominion surveyors as well as to the science of terrestrial magnetism.

Miscellaneous Activities.—Some attention has been given to seismology, mainly for the purpose of obtaining data for others to study; the service having suitable observers and locations for instruments. The first self-registering seismometer in operation in Canada was placed in the Toronto Observatory in 1897, and later on another was placed in the office of the service in Victoria, B.C. Both these instruments have recently been replaced by others of a more sensitive type.

The Meteorological Service has from its earliest days supervised the time service of the Dominion, making use of its observers, notably those at Toronto, Victoria, Montreal, Quebec and St. John, N.B., to take stellar observations and send out time signals.

Tables **6** and **7** which follow, have been prepared by the Meteorological Service of Canada for insertion in the Year Book. For the interpretation of Table **6** a note on the method used in measuring temperature and precipitation is appended.

Temperature and Precipitation.

Temperature.—At the stations of the Dominion Meteorological Service the highest and lowest temperature in each 24 hours, termed respectively the maximum and the minimum, are recorded by self-registering thermometers. For any month the sum of the daily maxima, divided by the number of days of the month, is the mean maximum temperature of that month. The mean minimum temperature is obtained in a similar manner. The half sum of the mean maximum and the mean minimum is called the mean temperature. The averages of these results for any particular month over a period of years are the average means for that period and are used as normal means or temperatures of reference. The highest and lowest temperatures recorded during the whole period of years are termed the extreme maximum and extreme minimum respectively. These latter figures are of course to be regarded as extraordinary, the more unlikely to recur the longer the period from which they have been derived. Temperatures below zero have the minus sign (−)

prefixed. The mean winter temperature is based on the records of January, February, March, November and December, and the mean summer temperature is based on those of June, July and August.

PRECIPITATION.—Under the collective term "precipitation" is included all moisture which has been precipitated from the atmosphere upon the earth: rain, snow, hail, sleet, etc. The amount of moisture is conveniently measured by determining the depth to which it has accumulated upon an impervious surface, and is always expressed in inches of depth. The total depth of snow is tabulated separately, but is added to the depth of rain after division by ten. An extended series of experiments in melting and measuring snow having been collated, the rule was deduced that a given fall of snow will, in melting, diminish on the average to one-tenth of its original depth. This rule is used in practice. All solid forms of precipitation other than snow are included in the tables of rain.

6.—Normal Temperature and Precipitation at Selected Canadian Stations.

VICTORIA, B.C.—Lat. 48° 25′ N., long. 123° 21′ W. (Observations for 30 years.)

Months.	Temperature °F.						Precipitation in inches.				
							Averages.			Extremes.	
	Mean daily.	Mean daily max.	Mean daily min.	Highest.	Lowest.	Mean daily range.	Rain.	Snow.	Total.	Greatest.	Least.
Jan.	39·2	43·5	35·0	56·0	−2·0	8·5	3·88	6·3	4·51	6·54	2·56
Feb.	40·3	45·0	35·6	60·0	6·0	9·4	3·08	4·5	3·53	6·20	0·96
Mar.	43·1	49·2	37·0	68·0	17·0	12·2	2·40	1·5	2·55	4·58	0·67
April.	47·7	54·9	40·6	75·0	24·0	14·3	1·73	S	1·73	5·40	0·21
May.	53·0	60·7	45·3	83·0	31·0	15·4	1·30	–	1·30	2·83	0·35
June.	57·1	65·1	49·0	88·0	36·0	16·1	0·93	–	0·93	2·37	0·08
July.	60·3	69·2	51·2	90·0	37·0	18·0	0·36	–	0·36	1·15	R
Aug.	60·0	68·8	51·2	88·0	37·0	17·6	0·65	–	0·65	2·26	0·00
Sept.	55·6	63·3	47·9	85·0	30·0	15·4	2·01	–	2·01	4·27	0·32
Oct.	50·4	56·0	44·8	70·0	28·0	11·2	2·55	–	2·55	5·60	0·46
Nov.	44·5	48·6	40·5	63·0	17·0	8·1	6·31	1·5	6·46	11·50	0·91
Dec.	41·5	45·1	37·8	59·0	8·0	7·3	5·86	0·5	5·91	12·41	1·66
Year.	49·4	55·8	43·0	90·0	−2·0	12·8	31·06	14·3	32·49	51·03	22·58

VANCOUVER, B.C.—Lat. 49° 17′ N., long. 123° 5′ W. (Observations for 30 years.)

Jan.	35·0	39·2	30·9	55·0	2·0	8·3	7·12	14·4	8·56	10·54	6·08
Feb.	37·8	43·1	32·5	58·0	10·0	10·6	5·90	3·2	6·22	10·17	2·60
Mar.	41·9	49·0	34·8	61·0	15·0	14·2	4·31	1·5	4·46	10·29	0·89
April.	47·0	55·8	38·3	79·0	27·0	17·5	3·09	–	3·09	5·29	1·04
May.	53·5	62·3	44·7	80·0	33·0	17·6	3·56	–	3·56	5·39	1·44
June.	58·4	67·7	49·1	88·0	36·0	18·6	2·82	–	2·82	5·42	1·43
July.	63·2	73·3	53·0	90·0	43·0	20·3	1·33	–	1·33	2·45	0·32
Aug.	61·5	71·0	52·0	92·0	39·0	19·0	1·71	–	1·71	5·86	0·22
Sept.	55·7	64·0	47·4	82·0	30·0	16·6	4·29	–	4·29	9·09	1·61
Oct.	49·2	55·7	42·6	69·0	23·0	13·1	5·69	–	5·69	9·20	1·76
Nov.	42·4	47·1	37·6	63·0	15·0	9·5	10·97	3·1	11·28	18·99	4·18
Dec.	38·9	42·8	35·0	58·0	17·0	7·8	7·27	2·9	7·56	9·55	4·21
Year.	48·7	56·0	41·5	92·0	2·0	14·5	58·06	25·1	60·57	72·29	52·27

PORT SIMPSON, B.C.—Lat. 54° 34′ N., long. 130° 25′ W. (Observations for 20 years.)

Jan.	34·0	40·0	28·1	64·0	− 9·0	11·9	8·62	9·8	9·60	16·74	1·08
Feb.	34·8	41·8	27·7	63·0	−10·0	14·1	6·07	11·8	7·25	16·65	1·93
Mar.	37·6	44·8	30·3	63·0	11·0	14·5	5·06	5·3	5·59	8·16	1·41
April.	41·6	49·9	33·4	73·0	18·0	16·5	4·85	3·0	5·15	14·31	2·24
May.	48·3	56·5	40·0	79·0	27·0	16·5	5·14	–	5·14	9·84	1·63
June.	52·8	60·5	45·1	88·0	34·0	15·4	4·26	–	4·26	7·50	1·20
July.	56·0	63·3	48·8	88·0	29·0	14·5	4·42	–	4·42	9·41	1·28
Aug.	56·7	63·8	49·5	80·0	31·0	14·3	6·93	–	6·93	14·11	1·74
Sept.	52·2	59·1	45·2	74·0	30·0	13·9	9·03	–	9·03	14·63	2·20
Oct.	47·1	53·5	40·7	65·0	28·0	12·8	12·21	–	12·21	16·99	6·71
Nov.	39·7	45·6	33·7	65·0	6·0	11·9	11·47	1·6	11·63	23·90	3·26
Dec.	36·9	42·6	31·2	62·0	5·0	11·4	10·11	8·7	10·98	18·82	5·23
Year.	44·8	51·8	37·8	88·0	−10·0	14·0	88·17	40·2	92·19	126·48	62·05

6.—Normal Temperature and Precipitation at Selected Canadian Stations—continued.

KAMLOOPS, B.C.—Lat. 50° 41′ N., long. 120° 18′ W. (Observations for 22 years.)

Months.	Temperature °F.						Precipitation in inches.				
							Averages.			Extremes.	
	Mean daily.	Mean daily max.	Mean daily min.	Highest.	Lowest.	Mean daily range.	Rain.	Snow.	Total.	Greatest.	Least.
Jan.	22·4	28·3	16·5	54·0	−31·0	11·8	0·13	7·7	0·90	0·60	0·35
Feb.	26·5	33·4	19·6	64·0	−27·0	13·8	0·20	6·0	0·80	1·17	0·02
Mar.	37·6	47·3	27·8	70·0	− 6·0	19·5	0·20	1·2	0·32	0·83	0·01
April.	49·7	61·1	38·3	92·0	19·0	22·8	0·36	S	0·36	1·36	R
May.	57·5	70·3	44·8	100·0	26·0	25·5	0·93	–	0·93	2·50	R
June.	64·6	76·4	52·7	101·0	35·0	23·7	1·23	–	1·23	3·07	0·57
July.	69·6	82·7	56·5	102·0	42·0	26·2	1·27	–	1·27	3·50	0·35
Aug.	68·1	80·9	55·4	101·0	35·0	25·5	1·05	–	1·05	3·73	0·00
Sept.	58·4	69·3	47·4	93·0	28·0	21·9	0·94	–	0·94	2·34	0·10
Oct.	47·8	56·2	39·3	82·0	16·0	16·9	0·57	0·2	0·59	1·41	R
Nov.	35·8	41·5	30·2	72·0	−22·0	11·3	0·40	6·5	1·05	1·23	0·07
Dec.	28·8	32·6	24·9	59·0	−17·0	7·7	0·20	13·5	1·55	0·64	0·12
Year.	47·2	56·7	37·8	102·0	−31·0	18·9	7·48	35·1	10·99	13·47	7·07

DAWSON, YUKON.—Lat. 64° 5′ N., long. 139° 20′ W. (Observations for 30 years.)

Jan.	−24·6	−18·0	−31·3	30·0	−68·0	13·3	0·00	8·6	0·86	1·73	R
Feb.	−12·0	− 4·3	−19·6	45·0	−55·0	15·3	R	7·3	0·73	1·35	0·20
Mar.	5·6	16·5	− 5·3	52·0	−47·0	21·8	0·01	4·7	0·48	1·21	0·00
April.	27·6	40·2	15·1	67·0	−30·0	25·1	0·18	4·7	0·65	1·68	0·23
May.	46·8	59·0	34·6	85·0	12·0	24·4	0·83	0·4	0·87	2·00	0·25
June.	56·9	70·3	43·6	90·0	27·0	26·7	1·18	0·3	1·21	2·66	0·25
July.	59·4	71·9	46·8	95·0	31·0	25·1	1·61	–	1·61	3·32	0·62
Aug.	54·0	66·2	41·7	85·0	23·0	24·5	1·51	–	1·51	2·38	0·07
Sept.	41·6	51·1	32·2	78·0	8·0	18·9	1·40	1·8	1·58	3·52	0·86
Oct.	26·4	32·7	20·1	68·0	−22·0	12·6	0·29	8·8	1·17	4·09	0·10
Nov.	0·4	6·4	− 5·6	46·0	−48·0	12·0	0·01	12·4	1·25	2·60	0·24
Dec.	−10·2	−4·3	−16·1	38·0	−63·0	11·8	R	10·9	1·09	2·09	0·08
Year.	22·6	33·0	13·0	95·0	−68·0	20·0	7·02	59·9	13·01	17·75	6·28

EDMONTON, ALTA.—Lat. 53° 35′ N., long. 113° 30′ W. (Observations for 30 years.)

Jan.	5·9	15·6	− 3·8	57·0	−57·0	19·4	0·06	7·0	0·76	2·49	0·05
Feb.	10·6	21·1	0·1	62·0	−57·0	21·0	0·00	6·7	0·67	2·33	S
Mar.	23·4	34·9	11·9	72·0	−40·0	23·0	0·05	6·2	0·67	1·93	R
April.	40·8	52·9	28·6	84·0	−15·0	24·3	0·44	3·6	0·80	2·60	0·04
May.	51·2	64·4	38·1	90·0	10·0	26·3	1·73	1·3	1·86	4·04	0·20
June.	57·3	70·1	44·4	94·0	25·0	25·7	3·26	S	3·26	8·53	0·00
July.	61·2	73·7	48·8	94·0	33·0	24·9	3·56	–	3·56	11·13	0·15
Aug.	59·0	71·6	46·4	90·0	26·0	25·2	2·47	–	2·47	6·43	0·49
Sept.	50·4	62·9	37·8	87·0	12·0	25·1	1·33	0·7	1·40	4·32	0·00
Oct.	41·7	53·2	30·3	82·0	−10·0	22·9	0·39	3·5	0·74	1·86	0·00
Nov.	24·5	33·3	15·6	74·0	−37·0	17·7	0·06	6·7	0·73	3·57	0·00
Dec.	16·0	24·7	7·3	60·0	−43·0	17·4	0·07	6·8	0·75	3·21	0·00
Year.	36·9	48·2	25·6	94·0	−57·0	22·6	13·42	42·5	17·67	27·81	8·16

MEDICINE HAT, ALTA.—Lat. 50° 2′ N., long. 110° 41′ W. (Observations for 30 years.)

Jan.	11·2	21·6	0·7	62·0	−51·0	20·9	0·00	6·1	0·61	1·72	0·00
Feb.	12·8	23·5	2·1	64·0	−46·0	21·4	0·01	6·0	0·61	1·51	0·00
Mar.	26·7	38·4	14·9	84·0	−38·0	23·5	0·11	5·0	0·61	1·62	S
April.	45·1	58·8	31·4	96·0	−16·0	27·4	0·37	2·4	0·61	2·26	0·03
May.	54·7	68·0	41·5	99·0	12·0	26·5	1·70	0·5	1·75	6·29	0·12
June.	62·5	75·6	49·3	107·0	30·0	26·3	2·57	S	2·57	5·62	0·00
July.	68·4	82·7	54·1	108·0	36·0	28·6	1·73	–	1·73	4·86	0·09
Aug.	66·0	80·7	51·4	104·0	31·0	29·3	1·51	–	1·51	5·65	0·00
Sept.	56·5	70·2	42·7	94·0	17·0	27·5	0·88	0·4	0·92	2·41	0·00
Oct.	45·8	58·7	32·9	93·0	−10·0	25·8	0·51	1·1	0·62	3·48	0·00
Nov.	29·3	39·9	18·7	76·0	−36·0	21·2	0·08	6·4	0·72	3·11	R
Dec.	21·1	31·0	11·2	68·0	−37·0	19·8	0·06	4·7	0·53	1·42	0·00
Year.	41·7	54·1	29·2	108·0	−51·0	22·2	11·53	32·6	12·79	22·28	6·72

6.—Normal Temperature and Precipitation at Selected Canadian Stations—continued.

FORT VERMILION, ALTA.—Lat. 58° 21′ N., long. 110° 52′ W. (Observations for 18 years.)

Months.	Temperature °F.						Precipitation in inches.				
	Mean daily.	Mean daily max.	Mean daily min.	Highest.	Lowest.	Mean daily range.	Averages.			Extremes.	
							Rain.	Snow.	Total.	Greatest.	Least.
Jan.	− 14·8	− 2·5	− 27·1	50·0	−77·0	24·6	0·00	4·7	0·47	1·80	0·15
Feb.	− 3·9	9·7	− 17·5	53·0	−58·0	27·2	0·00	3·7	0·37	0·65	0·20
Mar.	11·8	26·0	− 2·4	63·0	−41·0	28·4	0·01	7·0	0·71	1·70	0·00
April.	32·0	44·5	19·5	78·0	−29·0	25·0	0·23	6·1	0·84	1·85	0·00
May.	49·3	63·3	35·3	93·0	13·0	28·0	0·78	0·6	0·84	2·06	0·00
June.	57·9	72·2	43·7	98·0	26·0	28·5	1·65	0·1	1·66	3·44	0·25
July.	61·0	75·2	46·9	94·0	28·0	28·3	1·60	–	1·60	3·49	0·51
Aug.	57·1	70·4	43·8	101·0	28·0	26·6	1·57	–	1·57	3·32	0·53
Sept.	47·3	58·2	36·4	84·0	9·0	21·8	1·40	0·1	1·41	2·33	0·64
Oct.	33·1	43·1	23·1	70·0	−14·0	20·0	0·26	2·1	0·47	0·81	0·00
Nov.	14·0	22·4	5·6	48·0	−26·0	16·8	0·02	7·2	0·74	1·40	0·20
Dec.	− 1·7	10·2	− 13·6	65·0	−50·0	23·8	0·00	5·0	0·50	1·60	0·20
Year.	28·6	41·1	16·1	101·0	−77·0	25·0	7·52	36·6	11·18	14·78	7·60

FORT CHIPEWYAN, ALTA.—Lat. 58° 46′ N., long. 111° 13′ W. (Observations for 16 years.)

Jan.	− 11·9	− 3·5	− 20·4	45·0	−55·0	16·9	0·00	9·0	0·90	1·68	0·02
Feb.	− 9·1	0·5	− 18·7	46·0	−56·0	19·2	R	5·8	0·58	2·03	0·03
Mar.	5·0	15·1	− 5·0	47·0	−41·0	20·1	R	5·8	0·58	1·58	0·09
April.	28·5	39·4	17·6	69·0	−22·0	21·8	0·20	4·4	0·64	3·04	0·06
May.	44·5	53·8	35·1	83·0	− 3·0	18·7	0·65	1·6	0·81	2·08	0·02
June.	54·0	64·6	43·3	90·0	24·0	21·3	1·56	0·1	1·57	3·31	0·10
July.	61·5	71·0	51·9	93·0	26·0	19·1	2·64	–	2·64	9·52	0·21
Aug.	58·1	68·1	48·2	89·0	25·0	19·9	1·64	–	1·64	3·67	0·39
Sept.	45·2	53·0	37·3	79·0	13·0	15·7	1·52	0·5	1·57	2·93	0·27
Oct.	33·7	40·1	27·3	66·0	− 9·0	12·8	0·32	4·3	0·75	5·30	0·02
Nov.	11·0	17·9	4·2	56·0	−33·0	13·7	0·05	8·6	0·91	2·28	0·26
Dec.	2·2	10·3	− 5·9	49·0	−48·0	16·2	0·01	9·1	0·92	3·20	0·09
Year.	26·9	35·8	17·9	90·0	−56·0	17·9	8·59	49·2	13·51	16·99	6·70

QU'APPELLE, SASK.—Lat. 50° 32′ N. long. 103° 57′ W. (Observations for 30 years.)

Jan.	− 0·6	8·5	− 9·7	50·0	−47·0	18·2	0·00	6·9	0·69	2·28	0·05
Feb.	2·0	11·2	− 7·2	50·0	−55·0	18·4	0·00	8·1	0·81	2·85	0·12
Mar.	16·0	25·7	6·2	76·0	−45·0	19·5	0·06	9·6	1·02	4·11	0·05
April.	37·3	49·1	25·5	89·0	−24·0	23·6	0·43	6·7	1·10	3·59	0·29
May.	49·8	62·4	37·3	92·0	8·0	25·1	2·40	3·1	2·71	6·95	0·25
June.	59·6	70·8	48·4	101·0	25·0	22·4	3·69	S	3·69	7·19	0·32
July.	63·8	75·9	51·7	100·0	34·0	24·2	2·84	–	2·84	7·25	0·58
Aug.	61·1	73·3	48·9	100·0	27·0	24·4	2·04	–	2·04	5·03	0·30
Sept.	52·0	64·0	39·9	93·0	12·0	24·1	1·28	1·0	1·38	4·61	0·08
Oct.	40·8	51·5	30·2	86·0	−12·0	21·3	0·53	4·5	0·98	3·35	S
Nov.	21·8	30·4	13·3	73·0	−30·0	17·1	0·14	8·4	0·98	2·51	0·12
Dec.	10·7	18·5	2·8	49·0	−40·0	15·7	0·01	7·1	0·72	3·11	0·03
Year.	34·5	45·1	23·9	101·0	−55·0	21·2	13·42	55·4	18·96	26·47	10·14

PRINCE ALBERT, SASK.—Lat. 53° 12′ N., long. 105° 48′ W. (Observations for 30 years.)

Jan.	− 5·9	5·3	−17·1	53·0	−67·0	22·4	0·00	8·2	0·82	2·00	0·22
Feb.	− 1·3	11·3	−13·9	52·0	−70·0	25·2	0·01	6·8	0·69	2·15	0·04
Mar.	12·1	26·2	− 2·1	68·0	−44·0	28·3	0·10	7·7	0·87	2·56	0·17
April.	36·1	48·7	23·6	86·0	−23·0	25·1	0·38	4·4	0·82	3·37	0·03
May.	48·9	62·6	35·2	90·0	2·0	27·4	1·34	1·6	1·50	4·87	0·01
June.	58·1	71·0	45·1	96·0	17·0	25·9	2·67	–	2·67	7·36	1·00
July.	62·0	74·2	49·8	93·0	33·0	24·4	2·31	–	2·31	5·31	0·17
Aug.	58·8	71·7	46·0	94·0	22·0	25·7	2·31	–	2·31	8·01	R.
Sept.	49·4	61·7	37·1	87·0	14·0	24·6	1·32	0·7	1·39	2·94	0·09
Oct.	38·3	49·2	27·4	85·0	− 5·0	21·8	0·57	2·3	0·80	1·97	0·10
Nov.	18·5	27·4	9·5	66·0	−41·0	17·9	0·12	8·7	0·99	3·06	0·07
Dec.	5·3	15·1	− 4·5	58·0	−57·0	19·6	0·01	8·0	0·81	2·61	0·19
Year.	31·7	43·7	19·7	96·0	−70·0	24·0	11·13	48·4	15·97	29·88	9·25

6.—Normal Temperature and Precipitation at Selected Canadian Stations—continued.

WINNIPEG, MAN.—Lat. 49° 55′ N., long. 97° 6′ W. (Observations for 30 years.)

Months.	Temperature °F.						Precipitation in inches.				
							Averages.			Extremes.	
	Mean daily.	Mean daily max.	Mean daily min.	High-est.	Low-est.	Mean daily range.	Rain.	Snow.	Total.	Greatest.	Least.
Jan.	− 3·5	6·8	−13·8	42·0	−46·0	20·6	0·01	8·1	0·82	2·12	0·12
Feb.	− 0·5	10·7	−11·8	46·0	−46·0	22·5	0·01	7·4	0·75	1·80	0·09
Mar.	15·2	26·7	3·6	73·0	−37·0	23·1	0·21	9·6	1·17	3·00	0·29
April.	38·7	50·1	27·4	90·0	−13·0	22·7	1·10	4·4	1·54	5·64	0·25
May.	51·5	64·5	38·5	94·0	11·0	26·0	2·06	0·9	2·15	6·38	0·11
June.	62·6	74·9	50·2	101·0	21·0	24·7	3·03	–	3·03	6·30	0·45
July.	66·2	78·1	54·3	96·0	35·0	23·8	3·25	–	3·25	7·14	0·87
Aug.	62·7	75·0	50·4	103·0	30·0	24·6	2·18	–	2·18	4·75	0·77
Sept.	54·1	65·9	42·2	99·0	17·0	23·7	2·07	0·1	2·08	5·49	0·60
Oct.	41·6	52·0	31·3	85·0	− 3·0	20·7	1·22	1·4	1·36	5·67	0·29
Nov.	22·0	30·8	13·3	71·0	−33·0	17·5	0·17	8·2	0·99	2·34	0·06
Dec.	7·2	16·7	− 2·4	49·0	−44·0	19·1	0·06	8·6	0·92	3·99	0·11
Year.	34·8	46·0	23·6	103·0	−46·0	22·4	15·37	48·7	20·24	28·40	14·38

PORT ARTHUR, ONT.—Lat. 48° 27′ N., long. 89° 13′ W. (Observations for 30 years.)

Jan.	6·2	17·1	− 4·6	48·0	−40·0	21·7	0·02	7·4	0·76	1·46	0·21
Feb.	8·2	19·7	− 3·3	52·0	−51·0	23·0	0·05	6·5	0·70	2·77	0·04
Mar.	19·6	30·8	8·4	70·0	−42·0	22·4	0·11	8·1	0·92	2·76	0·18
April.	35·6	44·7	26·4	78·0	− 3·0	18·3	1·19	3·6	1·55	3·09	0·07
May.	46·0	55·6	36·5	89·0	16·0	19·1	1·98	0·5	2·03	4·10	0·36
June.	57·1	67·2	47·0	91·0	20·0	20·2	2·69	–	2·69	6·94	0·50
July.	62·6	73·5	51·7	96·0	33·0	21·8	3·76	–	3·76	9·21	1·39
Aug.	59·0	70·6	47·5	94·0	31·0	23·1	2·77	–	2·77	5·06	1·02
Sept.	52·8	62·3	43·3	88·0	19·0	19·0	3·26	–	3·26	7·54	1·30
Oct.	41·5	50·6	32·9	80·0	1·0	17·7	2·39	0·9	2·48	5·27	0·37
Nov.	26·7	34·6	18·7	69·0	−22·0	15·9	0·84	6·2	1·46	4·29	0·35
Dec.	13·4	22·7	4·1	51·0	−38·0	18·6	0·18	6·6	0·84	2·68	0·02
Year.	35·7	45·8	25·7	96·0	−51·0	20·1	19·24	39·8	23·22	29·43	18·80

TORONTO, ONT.—Lat. 43° 39′ N., long. 79° 20′ W. (Observations for 70 years.)

Jan.	22·1	29·1	15·2	58·0	−26·0	13·9	1·14	17·3	2·87	5·72	0·61
Feb.	21·7	29·2	14·1	54·0	−25·0	15·1	0·93	16·5	2·58	5·21	0·29
Mar.	29·0	36·3	21·9	75·0	−16·0	14·4	1·50	11·5	2·65	6·70	0·66
April.	41·4	49·6	33·3	90·0	6·0	16·3	2·15	2·5	2·40	4·90	0·09
May.	52·7	62·0	43·3	93·0	25·0	18·7	2·97	0·1	2·98	9·36	0·52
June.	62·6	72·4	52·9	97·0	28·0	19·5	2·76	–	2·76	8·09	0·57
July.	68·1	77·9	58·2	103·0	39·0	19·7	3·04	–	3·04	5·63	0·36
Aug.	66·6	76·1	57·1	102·0	40·0	19·0	2·77	–	2·77	7·09	R.
Sept.	59·2	68·2	50·2	97·0	28·0	18·0	3·18	–	3·18	9·76	0·40
Oct.	47·0	54·9	39·1	86·0	16·0	15·8	2·40	0·6	2·46	5·96	0·56
Nov.	36·3	42·5	30·1	70·0	− 5·0	12·4	2·49	4·6	2·95	5·84	0·11
Dec.	26·3	32·5	20·0	61·0	−21·0	12·5	1·53	13·0	2·83	6·00	0·47
Year.	44·4	52·6	36·3	103·0	−26·0	16·3	26·86	66·0	33·46	50·18	24·84

PARRY SOUND, ONT.—Lat. 45° 20′ N., long. 80° 1′ W. (Observations for 40 years.)

Jan.	14·3	24·5	4·0	54·0	−38·0	20·5	0·87	31·5	4·02	7·75	1·76
Feb.	13·7	24·9	2·6	58·0	−38·0	22·3	0·76	23·4	3·10	6·31	0·46
Mar.	23·5	34·3	12·8	71·0	−27·0	21·5	1·33	14·8	2·81	5·49	0·75
April.	39·0	49·4	28·5	82·0	− 3·0	20·9	1·76	3·1	2·07	4·03	0·75
May.	51·5	62·4	40·6	90·0	16·0	21·8	2·96	0·6	3·02	6·06	0·58
June.	61·8	72·7	50·9	94·0	31·0	21·8	2·47	–	2·47	5·47	0·70
July.	66·5	76·9	56·1	98·0	37·0	20·8	2·80	–	2·80	0·92	1·10
Aug.	64·2	74·5	54·0	93·0	35·0	20·5	2·83	–	2·83	5·46	0·63
Sept.	55·7	67·6	47·9	90·0	24·0	19·7	4·49	S.	4·49	8·43	1·52
Oct.	45·8	54·5	37·1	84·0	9·0	17·4	3·83	0·9	3·92	6·33	0·57
Nov.	33·5	40·8	26·2	69·0	−20·0	14·6	2·63	14·9	4·12	7·33	2·09
Dec.	20·5	29·7	11·4	56·0	−39·0	18·3	1·22	32·3	4·45	8·16	2·18
Year.	41·0	51·0	31·0	98·0	−39·0	20·0	27·95	121·5	40·10	50·30	31·59

6.—Normal Temperature and Precipitation at Selected Canadian Stations— continued.

COTTAM, ONT.—Lat. 42° 09′ N., long. 82° 44′ W. (Observations for 20 years.)

Months.	Temperature °F.						Precipitation in inches.				
	Mean daily.	Mean daily max.	Mean daily min.	Highest.	Lowest.	Mean daily range.	Averages.			Extremes.	
							Rain.	Snow.	Total.	Greatest.	Least.
Jan.	22·0	31·6	12·3	62·0	−20·0	19·3	1·59	11·8	2·77	6·01	1·45
Feb.	21·1	30·9	11·3	57·0	−25·0	19·6	1·61	10·1	2·62	6·16	1·11
Mar.	32·8	42·8	22·8	80·0	− 8·0	20·0	1·90	6·8	2·58	6·30	1·07
April	43·7	54·6	32·7	87·0	10·0	21·9	2·34	2·1	2·55	4·54	0·47
May	55·6	67·6	43·6	95·0	19·0	24·0	3·58	0·2	3·60	6·76	1·48
June	64·6	76·6	52·6	95·0	30·0	24·0	4·18	–	4·18	7·21	0·41
July	70·6	83·0	58·2	100·0	36·0	24·8	3·38	–	3·38	7·08	0·66
Aug.	68·9	81·6	56·2	100·0	35·0	25·4	2·49	–	2·49	5·66	0·00
Sept.	61·6	74·4	48·9	97·0	26·0	25·5	2·18	–	2·18	5·50	1·09
Oct.	49·4	61·7	37·1	85·0	10·0	24·6	2·48	0·1	2·49	5·36	1·07
Nov.	37·8	47·9	27·8	74·0	8·0	20·1	2·40	2·7	2·67	5·04	1·05
Dec.	26·4	35·0	17·9	70·0	−11·0	17·1	1·82	8·2	2·64	4·42	0·90
Year.	46·2	57·3	35·1	100·0	−25·0	22·2	29·95	42·0	34·15	38·97	26·67

HAILEYBURY, ONT.—Lat. 47° 26′ N., long. 79° 38′ W. (Observations for 20 years.)

Jan.	6·4	17·4	− 4·6	48·0	−40·0	22·0	0·27	17·5	2·02	3·43	1·20
Feb.	7·8	14·0	− 3·4	48·0	−48·0	17·4	0·20	18·0	2·00	3·94	0·54
Mar.	19·4	21·6	8·2	66·0	−34·0	13·4	0·52	16·0	2·12	4·43	0·59
April	37·1	48·0	26·2	81·0	− 3·0	21·8	1·25	5·8	1·83	4·38	0·88
May	50·8	62·2	39·4	93·0	14·0	22·8	2·83	1·5	2·98	4·73	0·75
June	61·7	73·4	50·0	100·0	28·0	23·4	2·91	–	2·91	5·55	0·72
July	66·0	76·8	55·4	102·0	36·0	21·4	2·72	–	2·72	8·21	1·55
Aug.	62·2	72·7	51·8	94·0	30·0	29·9	2·88	–	2·88	4·45	1·14
Sept.	55·3	64·9	45·7	91·0	24·0	19·2	2·31	–	2·31	7·44	0·96
Oct.	43·0	51·5	34·4	80·0	13·0	17·1	2·58	2·8	2·86	5·20	0·97
Nov.	23·2	35·2	21·1	67·0	−15·0	14·1	0·99	13·7	2·36	4·35	0·43
Dec.	13·6	22·0	5·2	51·0	−34·0	16·8	0·75	19·9	2·74	3·95	0·88
Year.	37·1	46·7	27·5	102·0	−48·0	19·2	20·21	95·2	29·73	39·77	27·13

MONTREAL, QUE.—Lat. 45° 31′ N., long. 73° 34′ W. (Observations for 50 years.)

Jan.	12·7	20·8	4·6	53·0	−26·0	16·2	0·85	31·4	3·99	6·18	2·08
Feb.	14·3	21·8	6·8	47·0	−24·0	15·0	0·72	26·1	3·33	6·35	0·49
Mar.	24·6	31·7	17·4	61·0	−15·0	14·3	1·45	19·5	3·40	7·32	1·01
April	41·3	49·3	33·4	77·0	8·0	15·9	1·69	5·3	2·22	4·19	0·48
May	52·9	61·6	44·3	89·0	23·0	17·3	3·01	0·1	3·02	6·22	0·11
June	63·9	73·6	54·3	92·0	38·0	19·3	3·21	–	3·21	8·00	0·90
July	69·1	77·4	60·8	95·0	47·0	16·6	3·95	–	3·95	7·72	0·96
Aug.	66·1	74·0	58·2	90·0	43·0	15·8	3·35	–	3·35	7·89	1·23
Sept.	58·5	66·2	50·8	90·0	33·0	15·4	3·46	–	3·46	6·65	0·88
Oct.	46·0	52·9	39·1	80·0	21·0	13·8	3·13	1·4	3·27	7·47	0·65
Nov.	33·3	39·2	27·4	68·0	0·0	11·8	2·26	11·7	3·43	6·40	1·44
Dec.	19·6	26·5	12·7	59·0	−21·0	13·8	1·17	25·2	3·69	5·94	1·12
Year.	41·8	49·6	34·1	95·0	−26·0	15·5	28·25	120·7	40·32	48·01	30·97

QUEBEC, QUE.—Lat. 46° 48′ N., long. 71° 12′ W. (Observations for 20 years.)

Jan.	9·7	17·7	1·8	47·0	−34·0	15·9	0·64	30·7	3·71	6·58	1·10
Feb.	12·0	20·2	3·7	49·0	−32·0	16·5	0·74	27·3	3·47	6·22	0·98
Mar.	22·8	30·7	15·0	64·0	−23·0	15·5	1·29	19·9	3·28	6·16	1·05
April	37·0	45·3	28·7	80·0	3·0	16·6	1·42	6·4	2·06	6·57	0·70
May	52·0	62·0	42·0	88·0	21·0	20·0	3·01	0·4	3·05	6·93	0·27
June	61·2	70·8	51·5	90·0	34·0	19·3	3·83	–	3·83	9·23	1·32
July	66·1	75·7	56·6	96·0	39·0	19·1	4·30	–	4·30	7·12	0·53
Aug.	62·8	71·5	54·1	90·0	38·0	17·4	4·00	–	4·00	9·58	1·35
Sept.	55·3	63·6	46·9	88·0	29·0	16·7	3·77	–	3·77	8·75	1·08
Oct.	42·0	47·8	36·3	77·0	14·0	11·5	2·94	1·5	3·09	6·99	0·93
Nov.	32·2	35·7	28·7	66·0	−10·0	7·0	1·75	14·2	3·17	7·09	0·90
Dec.	15·0	22·2	7·8	55·0	−27·0	14·4	0·85	25·2	3·37	6·78	1·13
Year.	39·0	47·0	31·1	96·0	−34·0	15·9	28·54	125·6	41·10	52·39	32·12

6.—Normal Temperature and Precipitation at Selected Canadian Stations—concluded.

SOUTH WEST POINT, ANTICOSTI, QUE.—Lat. 49° 23′ N., long. 63° 38′ W. (Observations for 30 years.)

Months.	Temperature °F.						Precipitation in inches.				
							Averages.			Extremes.	
	Mean daily.	Mean daily max.	Mean daily min.	Highest.	Lowest.	Mean daily range.	Rain.	Snow.	Total.	Greatest.	Least.
Jan.	11·9	19·8	4·0	47·0	−40·0	15·8	0·58	18·3	2·41	6·70	0·54
Feb.	12·5	19·7	5·3	46·0	−35·0	14·4	0·25	14·7	1·72	4·70	0·27
Mar.	21·0	27·1	15·0	47·0	−20·0	12·1	0·50	12·0	1·70	4·95	0·29
April.	30·5	35·4	25·6	71·0	− 3·0	9·8	1·12	5·6	1·68	7·92	R.05
May.	39·8	45·0	34·5	78·0	19·0	10·5	2·40	0·4	2·44	4·68	0·05
June.	48·4	53·4	43·5	85·0	26·0	9·9	2·93	0·1	2·94	5·58	0·40
July.	56·6	62·3	51·0	79·0	34·0	11·3	3·14	–	3·14	8·70	0·43
Aug.	56·2	61·5	51·0	80·0	28·0	10·5	3·43	–	3·43	4·92	0·76
Sept.	48·7	54·4	43·0	73·0	20·0	11·4	2·92	–	2·92	4·81	0·70
Oct.	39·8	45·1	34·5	68·0	8·0	10·6	3·40	0·5	3·45	9·85	0·54
Nov.	30·2	35·4	25·1	57·0	− 1·0	10·3	2·05	6·4	2·69	4·54	0·49
Dec.	20·5	27·2	13·8	52·0	−39·0	13·4	0·65	14·7	2·12	5·10	0·32
Year.	34·7	40·5	28·9	85·0	−40·0	11·6	23·37	72·7	30·64	45·43	15·83

FREDERICTON, N.B.—Lat. 45° 56′ N., long. 66° 40′ W. (Observations for 30 years.)

Jan.	13·3	24·3	2·2	55·0	−34·0	22·1	1·64	23·9	4·03	8·34	1·36
Feb.	15·4	26·6	4·1	51·0	−35·0	22·5	0·96	47·0	5·66	4·78	0·48
Mar.	26·5	36·9	16·0	65·0	−20·0	20·9	2·16	25·6	4·72	7·58	1·32
April.	38·9	49·5	28·3	82·0	− 2·0	21·2	1·97	10·0	2·97	4·43	0·30
May.	51·2	62·8	39·6	92·0	24·0	23·2	3·21	0·1	3·22	9·08	0·88
June.	59·6	71·7	47·5	92·0	26·0	24·2	3·71	–	3·71	8·01	1·47
July.	65·9	77·0	54·8	96·0	40·0	22·2	3·03	–	3·03	6·28	1·26
Aug.	63·2	73·7	52·7	95·0	35·0	21·0	3·97	–	3·97	6·99	0·76
Sept.	55·3	66·1	44·5	92·0	25·0	21·6	3·54	–	3·54	7·73	0·91
Oct.	43·4	54·2	32·6	81·0	15·0	21·6	4·02	0·5	4·07	9·99	0·85
Nov.	33·0	40·9	25·0	68·0	− 3·0	15·9	3·17	9·0	4·07	6·47	0·96
Dec.	19·4	28·2	10·5	58·0	−26·0	17·7	1·56	18·9	3·45	6·42	1·18
Year.	40·4	51·0	29·8	96·0	−35·0	21·2	32·94	135·0	46·44	54·62	35·02

YARMOUTH, N.S.—Lat. 45° 53′ N., long. 65° 45′ W. (Observations for 35 years.)

Jan.	30·0	34·3	19·6	54·0	− 6·0	14·7	2·75	20·3	4·78	0·92	1·97
Feb.	25·7	32·7	18·8	52·0	−12·0	13·9	2·13	21·8	4·31	7·77	2·28
Mar.	31·8	37·8	25·7	55·0	− 2·0	12·1	3·32	13·3	4·65	10·75	1·45
April.	39·7	46·4	33·1	72·0	17·0	13·3	3·17	5·5	3·72	7·12	0·82
May.	48·1	55·6	40·6	73·0	25·0	15·0	3·77	S.	3·77	7·66	0·93
June.	55·3	63·0	47·6	79·0	31·0	15·4	2·83	–	2·83	6·68	0·69
July.	60·8	68·2	53·2	86·0	41·0	15·0	3·38	–	3·38	8·42	0·52
Aug.	60·7	67·9	53·6	83·0	39·0	14·3	3·51	–	3·51	9·59	1·08
Sept.	56·0	63·2	48·8	79·0	31·0	14·4	3·50	–	3·50	5·70	0·88
Oct.	48·6	55·4	41·7	74·0	25·0	13·7	4·15	0·3	4·18	11·38	0·78
Nov.	41·8	46·6	37·1	66·0	11·0	9·5	3·77	4·0	4·17	8·56	1·51
Dec.	31·1	37·6	24·5	58·0	− 3·0	13·3	3·31	14·7	4·78	9·20	1·88
Year.	44·1	50·7	37·0	86·0	−12·0	13·7	39·59	79·9	47·58	70·90	35·06

CHARLOTTETOWN, P.E.I.—Lat. 46° 14′ N., long., 63° 8′W. (Observations for 30 years.)

Jan.	19·0	27·0	11·0	52·0	−19·0	16·0	1·46	19·6	3·42	7·62	1·10
Feb.	18·0	26·0	9·0	49·0	−21·0	17·0	0·86	17·5	2·61	6·37	0·88
Mar.	27·0	34·0	20·0	54·0	−15·0	14·0	1·67	13·9	3·06	5·54	1·48
April.	37·0	44·0	30·0	74·0	8·0	14·0	2·11	8·8	2·99	6·10	0·82
May.	48·0	56·0	40·0	81·0	26·0	16·0	2·51	1·0	2·61	5·85	0·40
June.	57·0	66·0	49·0	87·0	32·0	17·0	2·54	–	2·54	5·37	0·47
July.	66·0	74·0	58·0	91·0	37·0	12·0	2·96	–	2·96	8·97	1·81
Aug.	65·0	73·0	57·0	92·0	42·0	16·0	3·37	–	3·37	8·44	0·94
Sept.	58·0	65·0	50·0	87·0	34·0	15·0	3·36	–	3·36	8·75	0·06
Oct.	48·0	54·0	41·0	77·0	26·0	13·0	4·46	0·2	4·48	10·38	0·50
Nov.	37·0	42·0	32·0	62·0	11·0	10·0	3·48	6·0	4·08	8·00	1·74
Dec.	25·0	32·0	19·0	52·0	−11·0	13·0	2·19	16·0	3·79	7·25	1·41
Year.	42·0	49·0	35·0	92·0	−21·0	14·0	30·97	83·0	39·27	56·43	32·45

7.—Averages of Sunshine, Wind and Weather at Selected Canadian Stations.

(The years indicate the period of observation on which averages are based.)

*Victoria, B.C., lat. 48° 25′ N., long. 123° 21′ W.

Months.	Sunshine average.		Average no. days completely clouded.	Wind.					Average no. days with		
	No. of hours per month.	Percentage of possible duration.		Average no. of gales.	Average hourly velocity.	Prevailing direction.	Strongest wind recorded.		Thunder.	Fog.	Hail.
							Miles per hour.	Direction.			
Jan.	53·4	19·6	14	3	9·0	N	50	SE	–	1	–
Feb.	79·4	27·9	7	2	8·9	N	48	SW	–	1	–
Mar.	143·0	39·0	5	2	9·0	SE	52	SW	–	1	–
April	184·8	44·9	2	2	9·0	SW	50	SW	–	–	–
May	198·6	41·9	3	2	8·8	SW	41	W	–	1	–
June	215·1	44·7	1	2	9·7	SW	49	SW	–	–	–
July	293·7	60·4	1	2	9·1	SW	44	SW	–	–	–
Aug.	256·9	58·0	1	1	7·8	SW	43	SW	–	2	–
Sept.	183·3	48·6	3	1	6·5	SW	44	SW	–	3	–
Oct.	118·3	35·3	7	1	6·8	E	56	SW	–	4	–
Nov.	57·3	20·8	10	3	9·9	NE	57	SE	–	1	–
Dec.	38·1	14·9	13	3	8·8	NE	59	SE	–	1	–
Year	1,821·9	–	67	24	8·6	SW	59	SE	–	15	–

*Sunshine, 1895–1910; days clouded, 1901–1920; wind, days with thunder, etc., 1896–1915.

*Vancouver, B.C., lat. 49° 17′ N., long. 123° 5′ W.

Jan.	46·4	17·3	17		4·3	E	40	NW	–	3	–
Feb.	51·5	18·2	10		4·0	E	26	W	–	4	–
Mar.	135·6	36·9	7		5·0	E	30	SE	–	1	–
April	179·4	43·7	4	Average	4·8	SE	25	W	–	–	1
May	220·0	46·5	3	less	4·8	SE	23	W	1	–	–
June	228·0	47·2	2	than	4·5	E	27	W	1	–	–
July	265·6	54·6	2	one	4·1	S	22	W	2	–	–
Aug.	252·7	57·0	2	per	3·7	S	20	W	1	–	–
Sept.	162·9	43·3	5	month.	4·6	S	26	NW	1	2	–
Oct.	111·3	33·4	8		3·8	SE	35	W	–	6	–
Nov.	51·1	18·6	13		4·3	E	25	NW	–	4	–
Dec.	38·8	15·3	15		4·4	E	30	W	–	4	–
Year	1,743·3	–	88	–	4·4	SE	40	NW	6	24	1

*Sunshine, 1908–1917; days clouded, 1909-1920; wind, days with thunder, etc., 1905-1920.

†Kamloops, B.C., lat. 50° 41′ N., long. 120° 18′ W.

Jan.	65·0	24·7	12		3·5	S	25	SE	–	–	–
Feb.	87·0	31·1	7		3·1	S	24	NE	–	–	–
Mar.	166·0	45·2	4		4·5	SE	31	W	–	–	–
April	187·0	45·2	3	Average	4·8	S	30	W	–	–	–
May	224·0	46·8	3	less	4·4	S	30	W	–	–	–
June	240·0	50·1	3	than	4·1	SW	25	SE	–	–	–
July	295·0	59·9	1	one	4·1	SW	40	SE	1	–	–
Aug.	262·0	58·6	2	per	3·5	SW	30	SE	–	–	–
Sept.	185·0	49·1	3	month.	3·5	S	40	S	–	–	–
Oct.	140·0	42·3	6		3·6	SE	40	NW	–	–	–
Nov.	70·0	26·2	10		4·4	SE	40	W	–	–	–
Dec.	50·0	20·1	13		3·3	S	30	SE	–	–	–
Year	1,971·0	–	67	–	3·9	S	40	Several.	1	–	–

†Sunshine, 1906-1916; days clouded, 1906-1920; wind, etc., 1897-1916.

‡Edmonton, Alta., lat. 53° 35′ N., long. 113° 30′ W.

Jan.	79	31·6	10	–	4·4	W	36	W	–	–	–
Feb.	125	45·7	3	–	4·9	W	34	NW	–	–	–
Mar.	174	47·4	3	–	5·6	S	28	NW	–	–	–
April	212	50·7	3	–	7·2	SW	42	NW	–	–	–
May	222	45·1	3	1	6·8	SW	36	SE	1	1	–
June	242	47·8	3	–	5·9	W	34	NW	3	1	–
July	273	53·8	2	–	5·3	SW	30	NW	4	1	1
Aug.	256	56·3	2	–	4·7	W	26	NW	2	1	–
Sept.	184	48·6	3	–	5·3	W	36	W	1	1	–
Oct.	150	46·2	4	–	5·2	W	28	NW	–	–	–
Nov.	87	33·9	7	–	4·6	SW	25	NW	–	–	–
Dec.	77	33·2	11	–	4·2	SW	34	NW	–	–	–
Year	2,081	–	54	1	5·3	SW	42	NW	11	5	1

‡Sunshine, 1906-1916; days clouded, 1906-1920; wind, etc. 1897-1916.

7.—Averages of Sunshine, Wind and Weather at Selected Canadian Stations—continued.

(The years indicate the period of observation on which averages are based.)

*Medicine Hat, Alta., lat. 50° 2′ N., long. 110° 41′ W.

Months.	Sunshine average.		Average no. days completely clouded.	Wind.					Average no. days with		
	No. of hours per month.	Percentage of possible duration.		Average no. of gales.	Average hourly velocity.	Prevailing direction.	Strongest wind recorded.		Thunder.	Fog.	Hail.
							Miles per hour.	Direction.			
Jan.	88	33·1	8	2	5·9	SW	46	S	–	1	–
Feb.	117	41·6	6	2	6·0	SW	51	S	–	–	–
Mar.	169	46·0	3	2	6·6	SW	41	S, NW	–	–	–
April	220	53·4	2	3	7·4	W	50	S	–	–	–
May	233	48·9	3	2	7·5	S	60	N, W	2	–	–
June	268	55·0	1	2	7·5	SW	61	SW	4	–	–
July	326	66·6	1	1	6·4	SW	46	SW	4	–	–
Aug.	284	63·8	1	1	5·6	SW	50	W	3	–	–
Sept.	196	52·0	3	1	5·8	SW	50	S	1	–	–
Oct.	158	47·7	4	1	5·9	W	60	W	–	–	–
Nov.	102	37·8	6	2	6·1	SW	60	SW	–	–	–
Dec.	82	32·9	9	2	6·5	SW	60	N	–	–	–
Year	2,243	–	47	21	6·4	SW	61	SW	14	1	–

*Sunshine, 1906-1916; days clouded, 1910-1920; wind, days with thunder, etc., 1896-1915.

*Rosthern, Sask., lat. 52° 39′ N., long. 106° 21′ W.				*Prince Albert, Sask., lat. 53° 12′ N., long. 105° 48′ W.							
Jan.	91·6	36·1	10	–	3·3	S	26	NW	–	–	–
Feb.	137·7	50·0	4	–	3·2	SW	29	NW	–	–	–
Mar.	176·1	47·9	4	–	4·0	SW	35	NW	–	–	–
April	220·8	53·6	3	–	5·0	SE	36	NW	–	–	–
May	262·7	53·8	2	–	4·9	S	25	SE	–	–	–
June	280·1	56·0	2	–	4·2	SE	31	N	1	–	–
July	294·8	65·2	2	–	3·6	SW	31	SE	3	1	–
Aug.	272·9	60·3	2	–	3·0	SW	24	E	2	1	–
Sept.	190·8	50·4	4	–	3·8	SW	24	Several.	–	1	–
Oct.	141·4	43·3	6	–	3·9	SW	28	NW	–	–	–
Nov.	111·6	43·1	7	–	3·4	S	20	Several.	–	–	–
Dec.	78·3	33·0	11	–	3·2	SW	32	N	–	–	–
Year	2,258·8	–	57	–	3·8	S	36	NW	6	3	–

*Sunshine and days clouded, 1911-1920; wind 1896-1917, 1898 missing; days with thunder, etc., 1896-1917.

*Indian Head, Sask., lat. 50° 31′ N., long. 103° 40′ W.				*Qu'Appelle, Sask., lat. 50° 32′ N., long. 103° 57′ W.							
Jan.	81·4	32·8	10	2	9·4	NW	66	NW	–	1	–
Feb.	103·7	37·0	6	2	9·5	NW	46	W	–	1	–
Mar.	131·8	35·9	6	2	9·6	W	48	NW	–	1	–
April	170·1	41·2	4	2	10·0	SW	58	S	–	1	–
May	214·4	44·6	5	2	9·8	SW	50	NW	2	1	–
June	207·4	42·4	4	1	9·0	S	48	SW	4	1	1
July	272·4	55·5	2	1	8·2	SW	42	NW	5	1	–
Aug.	228·9	51·3	2	1	7·4	SW	38	SW, NW	4	1	–
Sept.	162·8	43·2	5	1	8·4	W	41	SW	1	1	–
Oct.	130·5	39·5	6	2	9·1	W	45	NW	–	1	–
Nov.	68·8	25·7	8	1	9·1	W	42	NW	–	1	–
Dec.	58·8	23·8	12	2	9·0	W	45	NW	–	1	–
Year	1,831·0	–	70	19	9·0	W	66	NW	16	12	1

*Sunshine and days clouded, 1891-1910; wind, etc., 1897-1917 (1908 missing).

†Winnipeg, Man., lat. 49° 55′ N., long. 97° 6′ W.

Jan.	110·3	41·4	9	7	12·8	W	50	N, W	–	–	–
Feb.	138·6	49·2	6	5	12·2	SW	55	NW	–	1	–
Mar.	175·0	47·7	7	6	13·1	S	66	NW	–	–	–
April	206·7	50·2	5	7	14·5	E	60	W	1	–	–
May	250·7	52·3	4	6	14·5	E	66	NW	2	–	–
June	250·4	51·6	3	5	12·7	E	46	NW	4	–	–
July	290·5	59·5	2	5	12·1	S	55	SW	5	–	–
Aug.	256·7	57·8	3	4	11·3	S	43	W	3	–	–
Sept.	179·6	47·7	4	6	13·0	S	55	W	2	–	–
Oct.	124·8	37·6	8	6	13·8	S	60	NW	1	–	–
Nov.	89·6	33·2	10	5	12·4	SW	45	N, W	–	1	–
Dec.	81·2	32·2	14	4	12·2	SW	59	W	–	–	–
Year	2,154·1	–	75	66	12·9	S	66	NW	18	2	–

†Sunshine, 1882-1910; days clouded, 1901-1920; wind, etc., 1897-1916.

7.—Averages of Sunshine, Wind and Weather at Selected Canadian Stations—continued.

(The years indicate the period of observation on which averages are based.)

*Haileybury, Ont., lat. 47° 26′ N., long. 79° 38′ W.

Months.	Sunshine average.		Average no. days completely clouded.	Wind.					Average no. days with		
	No. of hours per month.	Per centage of possible duration.		Average no. of gales.	Average hourly velocity.	Prevailing direction.	Strongest wind recorded.		Thunder.	Fog.	Hail.
							Miles per hour.	Direction.			
Jan.	92	33·4	10	1	2	NW	8	N, NW	–	1	–
Feb.	119	41·6	7	2	2	NW	9	SW	–	1	–
Mar.	165	44·8	5	2	2	S	9	SW	–	1	–
April.	193	47·3	5	1	2	S	8	N, NW	–	1	–
May.	210	45·0	4	1	2	S	8	NW	2	1	–
June.	259	54·5	2	1	2	SE	8	SW	4	1	–
July.	266	55·5	1	1	2	SW	8	Several.	6	–	–
Aug.	221	50·3	2	1	2	S	8	NW	4	1	–
Sept.	174	46·3	4	2	2	SW	8	S	2	1	–
Oct.	110	32·8	7	2	2	SW	9	NW	1	1	–
Nov.	56	20·1	13	2	2	NW	10	SW, W	–	1	–
Dec.	61	23·2	12	1	2	W	8	NW	–	1	–
Year.	1,733	–	72	17	2	SW	10	SW, W	19	11	–

*Sunshine, 1906-1916; days clouded, 1901-1920; wind, days with thunder, etc., 1896-1920.

*Gravenhurst, Ont., lat. 44° 56′ N., long. 79° 23′ W.				*Parry Sound, Ont., lat. 45° 20′ N., long. 80° 1′ W.							
Jan.	80·7	28·4	12	1	9·4	SE	48	W	–	–	–
Feb.	126·3	43·4	8	1	9·0	S	49	W	–	–	–
Mar.	153·0	41·5	7	1	9·1	SW	52	SW	1	–	–
April.	189·4	46·9	5	1	8·9	S	36	N	1	1	–
May.	217·2	47·4	5	1	7·9	S	39	SW	2	–	–
June.	229·8	49·4	2	–	6·8	SW	36	SW	2	–	–
July.	265·2	56·4	1	–	6·5	SW	36	NW	3	–	–
Aug.	252·6	58·2	1	–	6·9	S	30	SW, SE	3	–	–
Sept.	170·6	45·6	4	–	7·4	SW	36	SW	2	–	–
Oct.	138·5	41·0	7	–	8·7	S	36	SW	2	–	–
Nov.	85·4	29·9	11	2	10·5	SW	48	SW	–	–	–
Dec.	61·5	21·5	14	1	9·4	S	37	W, NW	–	–	–
Year.	1,970·2	–	77	8	8·4	S	52	SW	14	1	–

*Sunshine, 1902–1910, 1915–1920; wind, etc., 1896–1920.

†Toronto, Ont., lat. 43° 39′ N.. long. 79° 20′ W.

Jan.	77·9	27·0	11	6	13·6	SW	56	NE	–	2	–
Feb.	108·1	36·7	6	5	13·7	W	56	E	–	1	–
Mar.	150·0	40·5	6	5	12·8	SW	60	NW	1	1	–
April.	190·7	47·1	4	3	11·9	SE	50	E	1	1	–
May.	218·9	47·9	2	2	9·9	SE	54	W	3	1	–
June.	259·8	56·3	1	1	8·7	SE	35	NE	4	1	–
July.	282·2	60·4	1	1	8·0	S	36	W, SW	5	1	–
Aug.	252·7	59·8	1	–	8·0	SW	48	NE	6	–	–
Sept.	207·8	55·4	2	1	8·8	SE	50	S	3	2	–
Oct.	149·3	43·8	4	2	9·9	S	53	W	1	2	–
Nov.	85·3	29·4	8	4	12·2	SW	50	W	–	2	–
Dec.	65·2	23·5	10	7	13·2	SW	50	SW	–	1	–
Year.	2,046·9	–	56	37	10·9	S	60	NW	34	15	–

†Sunshine, 1882-1910; days clouded, 1901-1920; wind, etc., 1896-1920.

*Woodstock, Ont., lat. 43° 38′ N., long. 80° 46′ W.

Jan.	62·0	21·4	14	4	12·4	SW	57	SW	–	1	–
Feb.	88·7	30·2	8	4	12·3	W	47	NW	–	1	–
Mar.	122·6	33·2	9	5	12·2	SW	52	SW	–	1	–
April.	167·4	41·7	6	4	12·1	SW	48	SW	1	1	–
May.	206·8	45·6	4	3	10·5	SW	46	SW	2	1	–
June.	246·1	53·7	2	1	8·9	W	36	E	2	1	–
July.	275·4	59·4	1	1	8·4	W	36	SW	2	1	–
Aug.	238·0	55·4	2	1	8·0	SW	40	SW	2	2	–
Sept.	181·8	48·7	4	1	8·4	W	34	NW	2	1	–
Oct.	135·7	41·7	6	2	10·5	SW	40	NW	1	2	–
Nov.	76·4	26·3	10	3	11·9	SW	53	SW	–	2	–
Dec.	54·1	19·4	15	4	12·4	SW	49	SW	–	1	–
Year.	1,855·0	–	81	33	10·7	SW	57	SW	12	15	–

*Sunshine, 1882-1911; days clouded, 1901-1920; wind, days with thunder, etc., 1896-1920.

7.—Averages of Sunshine, Wind and Weather at Selected Canadian Stations—continued.

(The years indicate the period of observation on which averages are based.)

*MONTREAL, QUE., lat. 45° 31′ N., long. 73° 34′ W.

Months.	Sunshine average.		Average no. days completely clouded.	Wind.					Average no. days with		
	No. of hours per month.	Percentage of possible duration.		Average no. of gales.	Average hourly velocity.	Prevailing direction.	Strongest wind recorded.		Thunder.	Fog.	Hail.
							Miles per hour.	Direction.			
Jan.	76·0	34	12	6	15·5	SW	56	SW	–	1	–
Feb.	103·4	41	9	7	16·7	SW	66	NW	–	1	–
Mar.	145·9	45	6	8	16·7	SW	60	SE, SW	–	1	–
April	173·7	50	6	4	14·9	S	53	SW	1	1	–
May	204·6	51	4	2	12·8	S	49	W	2	–	–
June	217·3	50	2	2	11·6	SW	48	SW, NW	3	–	–
July	238·4	59	1	1	11·3	W	42	SW	5	–	–
Aug.	218·6	58	2	–	10·6	SW	36	W	4	–	–
Sept.	171·5	53	4	1	11·7	SW	38	SE, NW	3	1	–
Oct.	122·2	41	6	2	12·9	SW	45	NW	1	2	–
Nov.	68·5	30	11	5	14·6	SW	58	W	–	1	–
Dec.	60·0	26	14	5	14·0	SW	50	NW	–	1	1
Year	1,800·1	–	77	43	13·6	SW	66	NW	19	9	1

*Days clouded, 1901-1920; wind, etc., 1896-1920.

†QUEBEC, QUE., lat. 46° 48′ N., long. 71° 12′ W.

Jan.	86	31·0	11	9	15·0	SW	62	NE	–	1	–
Feb.	105	36·5	8	8	16·1	SW	69	NE	–	–	–
Mar.	152	41·4	7	8	15·3	SW	72	NE	–	1	–
April	174	42·5	5	7	14·4	NE	54	NE	1	1	–
May	197	42·1	4	6	14·4	NE	52	W	2	–	–
June	248	44·6	4	4	13·2	SE	46	NE	4	–	–
July	223	46·8	2	2	11·6	S	43	NE, SW	7	–	–
Aug.	224	48·4	2	1	10·7	SW	39	NE, SW	5	–	–
Sept.	152	45·2	5	3	11·5	SW	42	NE	2	1	–
Oct.	123	40·2	8	4	12·4	SW	66	NE	1	2	–
Nov.	65	24·0	10	5	14·0	SW	58	NE	–	1	–
Dec.	70	28·8	13	6	13·9	SW	68	NE	–	1	–
Year	1,819	–	79	63	13·5	S	72	NE	22	8	–

†Sunshine, 1903-1912; days clouded, 1903-1920; wind, etc., 1896-1920.

*WOLFVILLE, N.S., lat. 45° 5′ N., long 64° 21′ W.				*YARMOUTH, N.S., lat. 45° 53′ N., long. 65° 45′ W.							
Jan.	84·0	29·6	10	4	13·2	NW	53	SW, NW	–	2	–
Feb.	99·6	34·4	10	4	13·1	NW	60	SW	–	2	–
Mar.	134·0	36·4	8	4	12·5	SW	60	NW	–	4	–
April	147·6	36·6	7	2	11·1	SW	43	NW	–	4	–
May	200·8	43·8	5	1	9·9	SW	44	–	1	7	–
June	230·0	49·4	2	–	8·6	S	40	SE	2	7	–
July	235·6	50·2	2	–	7·7	SW	36	S	2	13	–
Aug.	232·4	53·6	2	–	6·7	SW	65	SW	2	11	–
Sept.	182·5	48·6	3	1	8·0	SW	48	W	1	7	–
Oct.	151·4	44·8	7	2	10·0	S	54	SE	1	4	–
Nov.	98·9	34·7	8	3	12·0	SW	60	–	–	2	–
Dec.	67·2	24·8	11	3	12·6	SW	62	SW	–	2	–
Year	1,864·0	–	75	24	10·5	SW	65	SW	9	65	–

*Sunshine, 1895-1910; days clouded, 1901-1920; wind, days with thunder, etc., 1896-1915.

*FREDERICTON, N.B., lat. 45°56′ N., long. 66° 40′ W.

Jan.	110·3	39·2	10	2	8·2	NW	38	SW	–	1	–
Feb.	124·2	43·1	8	2	9·3	NW	49	NW	–	1	–
Mar.	154·8	42·0	8	2	9·5	NW	40	NW	–	1	–
April	184·6	45·6	7	1	8·2	NW	36	NW	–	2	–
May	205·4	44·4	6	1	8·0	SW	37	NW	1	1	–
June	217·6	46·4	5	–	7·4	W	34	NW	2	1	–
July	236·8	50·2	3	–	6·6	SW	32	NW	3	2	–
Aug.	223·0	51·2	3	–	6·7	W	28	NW	2	2	–
Sept.	179·0	47·8	5	–	6·0	NW	30	NW	1	4	–
Oct.	151·4	44·8	6	1	7·7	W	33	SE, NW	–	3	–
Nov.	91·3	33·3	11	1	8·1	NW	37	–	–	2	–
Dec.	94·1	35·9	12	2	8·5	NW	42	NW	–	2	–
Year	1,972·5	–	84	12	7·9	W	49	NW	9	22	–

*Sunshine, 1881-1911; days clouded, 1901-1920; wind, etc., 1896-1920.

7.—Averages of Sunshine, Wind and Weather at Selected Canadian Stations—continued.

(The years indicate the period of observation on which averages are based.)

†Charlottetown, P.E.I., lat. 46° 14′ N., long. 63° 8′ W.

Months.	Sunshine average.		Average no. days completely clouded.	Wind.					Average no. days with		
	No. of hours per month.	Percentage of possible duration.		Average no. of gales.	Average hourly velocity.	Prevailing direction.	Strongest wind recorded.		Thunder.	Fog.	Hail.
							Miles per hour.	Direction.			
Jan.	89	31·8	13	2	8·8	NW	46	NW	–	–	–
Feb.	112	38·9	10	1	8·4	SW	55	SE	–	1	–
Mar.	130	35·3	9	2	8·6	S	41	SW	–	1	–
April	153	37·6	9	–	8·4	SE	33	SE	1	1	–
May	195	42·1	7	–	8·1	S	32	NE	1	–	–
June	226	48·2	6	–	7·0	S	28	S	2	–	–
July	238	50·2	4	–	6·3	SW	32	SW	2	–	–
Aug.	229	52·4	5	–	6·5	SW	31	SW	2	–	–
Sept.	179	47·8	6	–	7·2	SW	32	S, NW	1	–	–
Oct.	114	33·9	11	1	8·2	SW	38	S	–	1	–
Nov.	73	25·9	13	1	9·1	W	38	NE	–	1	–
Dec.	60	22·3	17	1	9·0	NW	38	SW	–	–	–
Year	1,798	–	110	8	8·0	SW	55	SE	9	5	–

†Sunshine, 1906-1916; days clouded, 1907-1920; wind, etc., 1896-1920.

*Calgary, Alta., lat. 51° 2′ N., long. 114° 2′ W.

Months.	Wind.					Average number of days with		
	Average number of gales.	Average hourly velocity.	Prevailing direction.	Strongest wind recorded.		Thunder.	Fog.	Hail.
				Miles p. h.	Direction.			
January	1	6·4	W	52	NW	–	–	–
February	1	6·6	W	48	W	–	–	–
March	1	7·6	SW	48	SW	–	–	–
April	1	8·5	W	56	NW	–	–	–
May	1	8·8	NW	48	N, NW	1	–	–
June	1	8·6	NW	50	W	1	–	1
July	1	7·6	NW	48	NW	3	–	–
August	1	7·3	NW	36	W	2	–	–
September	1	7·5	NW	62	NW	–	–	–
October	1	6·5	NW	40	W	–	–	–
November	1	6·0	W	36	Several.	–	–	–
December	1	6·5	W	52	W	–	–	–
Year	12	7·3	W	62	NW	7	–	1

*Wind, days with thunder, etc., 1897-1916.

†Pas, Man., lat. 53° 49′ N., long. 101° 15′ W.

January	1	7·5	W	43	NW	–	–	–
February	1	7·2	W	40	W	–	–	–
March	1	7·5	S	45	W	–	1	–
April	–	8·3	E	41	SW	–	–	–
May	–	8·5	E	40	–	–	–	–
June	2	7·8	SE	44	SW	2	–	–
July	1	8·9	W	54	SW	–	2	–
August	1	7·7	W	48	NW	2	1	–
September	1	6·8	W	41	NW	–	1	–
October	1	7·5	W	42	W	–	–	–
November	–	7·9	W	33	NW	–	–	–
December	–	7·1	SW	38	W	–	–	–
Year	9	7·7	W	54	SW	4	5	–

†Wind, days with thunder, etc., 1910-1920.

*Port Nelson, Man., lat. 57° 0′ N., long. 92° 56′ W.

January	2	12·4	W	34	W, NW	–	1	–
February	3	12·9	W	48	NW	–	–	–
March	3	11·4	W	41	NE	–	1	–
April	2	12·8	SE	51	NW	–	1	–
May	1	12·4	NE	40	NE	–	3	–
June	3	13·6	NE	38	NE, NW	3	2	–
July	2	13·8	NE	53	NE	3	1	–
August	2	12·4	SW	42	NE, NW	2	2	–
September	3	12·8	SW	42	SW, NW	1	1	–
October	4	13·6	NW	40	–	–	1	–
November	5	13·1	NW	43	N	–	2	–
December	2	11·7	W	42	NW	–	–	–
Year	32	12·7	SW	53	NE	9	15	–

*Wind, days with thunder, etc., 1916-1920.

7.—Averages of Sunshine, Wind and Weather at Selected Canadian Stations—concluded.

(The years indicate the period of observation on which averages are based.)

†Port Arthur, Ont., lat. 48° 27′ N., long., 89° 13′ W.

Months.	Wind.					Average number of days with		
	Average number of gales.	Average hourly velocity.	Prevailing direction.	Strongest wind recorded.		Thunder.	Fog.	Hail.
				Miles per hour.	Direction.			
January	1	6·9	NW	37	NW	–	–	–
February	1	7·1	NW	50	NW	–	–	–
March	1	7·8	NW	52	NW	–	–	–
April	1	7·8	S	39	NW, NE	1	1	–
May	1	7·8	SE	41	NE	1	2	–
June	–	6·7	E	51	NW	2	2	–
July	–	6·4	S	34	NW	4	1	–
August	–	6·7	SW	41	NW	3	2	–
September	–	7·1	SW	62	NW	2	2	–
October	1	7·4	SW	42	NW	1	3	–
November	1	8·1	NW	40	NW	–	1	–
December	1	7·4	NW	52	NW	–	1	–
Year	8	7·3	SW	62	NW	14	15	–

†Wind, days with thunder, etc., 1896-1920.

‡White River, Ont., lat. 51° 30′ N., long. 94° 2′ W.

January	–	4·2	SE	28	NW	–	–	–
February	–	3·3	E	22	S, NW	–	–	–
March	–	4·4	E	30	N	–	–	–
April	–	5·0	E	30	N	–	–	–
May	–	5·6	SE	28	SW	1	–	–
June	–	5·0	S	32	SW	1	–	–
July	–	4·4	SW	23	N	2	1	–
August	–	3·6	S	24	SW	2	1	–
September	–	3·9	SW	24	S	2	1	–
October	–	4·1	SE	25	SW	–	–	–
November	–	4·6	SE	25	NW, SW	–	–	–
December	–	3·7	S	24	S	–	–	–
Year	–	4·3	SE	32	SW	8	3	–

‡Wind, days with thunder, etc., 1896–1920.

*Cochrane, Ont., lat. 49° 4′ N., long. 80° 58′ W.

January	–	7·8	W	34	NW	–	–	–
February	–	7·2	NW	32	NW	–	–	–
March	–	8·2	SW	33	NW	–	–	–
April	–	8·4	SE	35	NW	–	–	–
May	–	8·5	S	35	NW	1	1	–
June	–	8·4	S	34	SW	2	–	–
July	–	7·1	W	29	SW	3	–	–
August	–	6·5	W	31	NW	2	–	–
September	–	7·3	SW	30	SW	1	1	–
October	–	7·2	SW	35	SE	–	1	–
November	–	6·6	SW	30	SW	–	1	–
December	–	6·8	NW	27	SW	–	1	–
Year	–	7·5	SW	35	NW, SE	9	5	–

*Wind, days with thunder, etc., 1911–1920.

†South West Point, Anticosti. Que., lat. 49° 23′ N., long. 63° 38′ W.

January	16	21·9	NW	72	NW	–	–	–
February	13	19·9	SW	65	NW	–	1	–
March	12	18·6	S	68	NW	–	1	–
April	8	15·8	SE	70	NW	–	3	–
May	6	13·8	SE	52	NW	–	3	–
June	4	13·3	SE	56	W	–	5	–
July	3	12·1	SE	44	W	–	7	–
August	4	12·3	SE	68	W	–	5	–
September	6	14·3	SE	58	NW	–	3	–
October	10	16·6	S	67	W	–	4	–
November	11	18·8	SE	98	N	–	1	–
December	14	20·6	SW	71	NW	–	1	–
Year	107	16·5	S	98	N	–	34	–

†Wind, days with thunder, etc., 1897–1920.

II.—HISTORY AND CHRONOLOGY.

1.—HISTORY OF CANADA.[1]

NOTE.—It has not been considered desirable to load the text of this section with numerous dates. For these the reader is referred to the chronological history printed at the end of this section of the Year Book.

The Founding of the French Colony.—The year 1608 may be regarded as the birth-year of Canada. The country and the name had been made known by the voyages of the Breton sea-captain, Jacques Cartier, of St. Malo, in the early half of the preceding century, and one or two ill-fated and wholly abortive attempts at settlement had subsequently been made; but in 1608, under the leadership of Samuel de Champlain, of Brouages in Saintonge, the first permanent settlement was made. It was but a slender colony that he planted under the shadow of the great rock of Quebec; the germ of life, however, was there, a life which, surviving all perils and difficulties, finally struck its roots deep and branched out into a numerous and vigorous people.

The claim of France to the St. Lawrence country was held to have been established by the discoveries made in the name of the French King, Francis I. It was assumed that what was then called Acadia, which may be described roughly as the region of our present Maritime provinces, had also become French territory, notwithstanding the fact that Cape Breton had been discovered in 1497 by John Cabot, sailing under a commission from Henry VII of England. During the five years preceding the arrival of Champlain's colony at Quebec, settlements in which Champlain took part had been attempted by the French at Port Royal (Annapolis) in Nova Scotia, and at the mouth of the St. Croix river.

JACQUES CARTIER

The Fur Trading Companies.—The main motive for the occupation of the country, so far as the adventurers—Champlain perhaps alone excepted—were concerned, was the fur trade, though the royal commissions or patents under which they operated invariably contained stipulations for actual colonization and for missionary work among the Indians. These stipulations were systematically evaded by a succession of associations or companies to whom privileges were granted. Of course there were difficulties in the way; the native Indians were uncertain in their movements and at times menacing; but this was not the real deterrent to settlement. The adventurers thought, and with reason, that settlement would hamper trade.

Champlain's colony had at first consisted of about thirty persons. Twenty years later, when it barely exceeded one hundred, Charles I of England during his war on France granted letters of marque to David Kirke, authorizing him to attack the French possessions in Canada. After fitting out a small fleet of privateers, Kirke's first stroke, early in 1628, was to capture, in the mouth of the St. Lawrence,

[1]Revised and abridged from the history prepared under the direction of Arthur G. Doughty, C.M.G., LL.D., Deputy Minister, Public Archives of Canada, for the 1913 Year Book.

a French fleet of eighteen vessels, which were carrying out a number of new colonists for the settlement, as well as badly needed supplies of provisions, goods and military stores. Just at this time Cardinal Richelieu, moved by the representations Champlain had made as to the miserable condition and prospects of the colony, had resolved to create a company on a much wider basis than any previously formed. This was the Company of New France, more generally known as the Company of One Hundred Associates. The preamble of the edict issued set forth in forcible terms "the lamentable failure of all previous trading associations to redeem their pledges in the matter of colonization; and the new associates were, by the terms of their charter, bound in the most formal and positive manner to convey annually to the colony, beginning in the year 1628, from two to three hundred bonâ fide settlers, and, in the fifteen following years, to transport thither a total of not less than four thousand persons male and female." The charter contained other useful stipulations, including the maintenance of a sufficient number of clergy to meet the spiritual wants both of settlers and natives. So long as it fulfilled these conditions, the company was to have absolute sovereignty, under the French king, of all French possessions between Florida and the Arctic regions, and from Newfoundland as far west as it could take possession of the country.

It was in furtherance of these plans that the fleet which Kirke captured had been sent out. Had Kirke sailed at once to Quebec the place would have fallen but he preferred to let starvation do his work. The following year he took the town without a struggle and set up his brother as governor. Champlain and many of his associates returned to France. But in the meantime peace had been signed and in 1632 Canada was given back to France.

It now remained to be seen what Richelieu's company would effect. Crippled by the loss of the capital invested in the fleet of 1628, it did not accomplish much, although a beginning was made when Champlain returned to Quebec in May, 1633, bringing with him over a hundred settlers. His life was, however, drawing to a close, and he died on Christmas Day, 1635.

CHAMPLAIN

Several events of special importance may be noted here. In 1639, two ladies of distinction arrived from France, Madame de la Peltrie and Madame Guyard, the latter better known as Mère de l'Incarnation. Their monument is the Ursuline Convent of Quebec. In 1641 M. de Maisonneuve conducted a band of earnest followers to Montreal in order to found there a strictly Christian colony. Twelve years later Sister Margaret Bourgeoys established at Montreal the Congrégation de Notre Dame for the education of girls. The year 1668 is glorious in Canadian annals for what has been called the Canadian Thermopylae. To avert an attack on Montreal, Dollard, a young inhabitant of the place, and a score or so of companions threw themselves in the path of the Iroquois, and so sternly and heroically defended a position they had fortified on the river Ottawa that the Indians were disheartened and withdrew. Of the Canadians, all but one perished.

The year 1659 is marked by the arrival of Monseigneur de Laval, with the title of Bishop of Petræa, *in partibus*, and the powers of Vicar Apostolic, to preside over the church in New France; from 1674 to 1688 he exercised full powers as Bishop of Quebec. In 1663, the Company of New France practically acknowledged its insolvency and made a surrender of all its rights and privileges to the King. It had not carried out its engagements; in fact its policy had differed little from that of its less distinguished predecessors. It had bound itself to plant in Canada not less than 4,000 settlers in fifteen years, yet a census taken in 1666, 35 years after it had begun operations, showed that the whole population of the country was less than 3,500.

Royal Government.—The King accepted the surrender made by the company and proceeded to establish a still larger one under the name of the West India Company. Colbert, the great Minister of Marine and Colonies and the incarnation of the mercantile system, was the inspirer of the idea; yet, as the prestige of Richelieu had not saved the Company of New France from shipwreck, neither did that of Colbert and his royal master save the Company of the West Indies. It lost its monopoly of Canadian trade in 1669. The country had been governed since 1663 by the Sovereign Council of New France.

The first governor of New France to make a name for himself in history is Louis de Buade, Count Frontenac, who arrived in Canada in the year 1672; but a few years earlier a man of greater note had been sent to Canada as intendant, an office involving financial and judicial authority exercised in nominal subordination to the Governor as the King's personal representative, but with a large measure of practical independence. This was Jean Talon. He was the first to perceive the industrial and commercial possibilities of the country, and the first to take any effectual steps for their development. Mines, fisheries, agriculture, the lumber trade and one or more lines of manufacture all received his attention. He returned to France shortly after the arrival of Frontenac, but he had given an impulse which had lasting effects upon the economic life of Canada.

Frontenac, a veteran soldier, established good relations with the Iroquois, who had been the most dangerous enemies of the colony, but his relations with the intendant, Jacques Duchesneau, who succeeded Talon after an interval of three years, were most unhappy, and those with Bishop Laval were somewhat strained. So much trouble did their disputes cause to the home government that both he and the intendant were recalled in 1682. Two mediocre governors, M. de la Barre, and the Marquis de Denonville, succeeded; after them Frontenac, now in his seventieth year, was again sent out. It was on the day of his departure from France, August 5, 1689, that the terrible massacre by the Iroquois, narrated in all Canadian histories, occurred at Lachine.

A month or so before this, France had declared war on England as a sequel to the English Revolution of 1688, and Frontenac made it his first duty on arriving in Canada to organize attacks on the neighbouring English colonies. The massacre at Lachine was outdone by massacres by French and Indians at Schenectady, and other outlying English settlements.

The English colonists did not remain passive under these attacks. In May, 1690, an expedition under Sir William Phipps, a native of what is now the state of Maine, sailed from Nova Scotia, and took possession of Port Royal and other forts and settlements in that region. With a greatly increased force, some thirty-two ships in all and over two thousand men, he set sail for Quebec in full expectation of capturing that fortress and making an end of French power in North

America, but the expedition proved a disastrous failure and involved the people of Boston in a very heavy financial loss.

The remaining years of Frontenac's second administration were marked by border warfare and negotiations with Indian allies and enemies, followed by a general peace which was solemnly ratified a few years later. Frontenac died on November 28, 1698.

During the remainder of the French *régime* the history of Canada was marked by no outstanding events. The war of the Spanish Succession caused a renewal of war on the Canadian frontier, two of the principal incidents being the massacres of English colonists at Deerfield and Haverhill in Massachusetts (1708). In the summer of 1711 a powerful expedition was despatched against Quebec by way of the St. Lawrence under the command of Sir Hovenden Walker. Had this force reached Quebec it was amply sufficient to overpower any opposition that could have been made to it, but the elements seemed to be arrayed against the invader. A number of transports, crowded with troops, were wrecked at Sept Iles, and the enterprise had to be abandoned. The war in Europe was, however, disastrous to France, and the Treaty of Utrecht (1713) transferred to England the French possessions of Acadia and Newfoundland. The limits of Acadia were not at the time defined with any accuracy, and the French continued to occupy the mouth of the St. John river and what is now the city of St. John. Cape Breton, or as they called it, Ile Royale, was left by the treaty in their possession, together with Ile St. Jean,

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CANADA IN 1763.

now Prince Edward Island, and they perceived the importance of placing the former island in an adequate state of defence. Special attention was paid to the fortification of Louisburg. War having again broken out between England and France, an expedition was formed in New England under the command of Sir William

Pepperell, to attack the French fortress. A small English squadron joined the expedition, and the capture of the place was accomplished on June 16, 1745. The peace of Aix la Chapelle, in 1748, restored the fortress and the whole island to France, to the great disappointment of the New Englanders. Ten years later (July 26, 1758), the Seven Years' War having broken out, it again passed into the possession of Great Britain after a siege in which General Wolfe greatly distinguished himself.

The Capture of Quebec and Cession of Canada.—The expedition against Quebec was part of the war policy of the great William Pitt, Earl of Chatham, who chose Wolfe for the command. The story of how Wolfe's army scaled the heights above the city on the night of September 12-13, 1759, is among the best known of historical incidents. The battle that ensued on the morning of the 13th has been rightly looked upon as one of the most decisive events in the world's history. Wolfe died victorious; Montcalm, no less gallant a soldier, was carried from the field fatally wounded, and expired on the following day. Quebec surrendered to the British, and the capitulation of Montreal, a year later, placed the whole country in their possession, though the Treaty of Paris, by which Canada was ceded to Great Britain, was not signed till February 10, 1763.

GENERAL WOLFE

Military Government.—For a period of fifteen years after 1759, the government of Canada was of a military character, and no small amount of confusion existed in the administration of justice and the general application of law to the affairs of the community. In the year 1774, an important step was taken in the passing of the Quebec Act, which established a council with limited legislative powers, sanctioned the use of French law in civil matters, confirmed the religious orders in the possession of their estates, granted full freedom for the exercise of the Roman Catholic religion and authorized the collection of the customary tithes by the clergy. The Act also defined the limits of Canada as extending south to the Ohio and west to the Mississippi. On that account, and also on account of the recognition granted to the Roman Catholic church, it gave great umbrage to the older colonies. The following year witnessed, in the battle of Lexington, the first bloodshed in their quarrel with the Mother Country.

Towards the end of 1775 two bodies of colonial troops marched against Canada, one under Montgomery by way of lake Champlain, and the other under Benedict Arnold through the woods of Maine. Montreal was captured and the two commanders joined forces some miles above Quebec. On December 31, each led an attack on that city from different quarters. Both attacks were repulsed; Montgomery was slain and Arnold was wounded. In the spring the Americans retreated and shortly afterwards evacuated the country. Canada had been saved by the Fabian policy of Carleton.

The Grant of Representative Institutions.—The task which devolved on Great Britain in the government of her new possession demanded an amount of practical wisdom which few of her statesmen possessed. The military men at

the head of affairs in the colony—Murray, Carleton, Haldimand—were men of character and intelligence; but the questions arising between the two races which found themselves face to face in Canada, as an English immigration began to flow into the country, both from the British Isles and from the colonies to the south, hardly admitted of theoretical treatment. The Quebec Act, which created a nominative Council but not a representative Assembly, did not satisfy the new-comers. Racial antagonism was by this time causing friction, so the British Government decided to divide the Province of Quebec into the two provinces of Upper and Lower Canada, and to give each a legislature consisting of two houses—a nominative Council and an elective Assembly. The population of Lower Canada at this time was about 165,000 and that of Upper Canada probably 15,000. The population of the country as a whole had been greatly increased by the Loyalist emigration, partly voluntary, partly compulsory, from the United States. In Lower Canada the exiles found homes chiefly in that portion of the province known as the Eastern Townships and in the Gaspé peninsula, and in Upper Canada in the townships fronting on the St. Lawrence river, around the bay of Quinte, in the Niagara district and along the Detroit river.

GENERAL MONTCALM

It was not, however, only the Canadian provinces that received accessions to population from this source. Considerable bodies of Loyalists directed their steps to the provinces of Nova Scotia and New Brunswick, and some also to Prince Edward Island. Wherever they chose to settle, lands were granted to them by the British government, and after a period of struggle with new conditions many began to find comfort and prosperity under the flag of their forefathers. These provinces all possessed what has been called a "pre-loyalist" element in their population, consisting of settlers from New England and other parts of what subsequently became the United States. These, as difficulties developed between Great Britain and her American colonies, did not, as a rule, manifest any very strong British feeling, and the relations between them and the later Loyalist settlers were not altogether cordial.

Nova Scotia, which had been British since its cession under the Treaty of Utrecht, received parliamentary institutions as early as 1758, though in practice the administration was mainly in the hands of the Governor of the province and his Council. Up to the year 1784 it was held to embrace what is now New Brunswick and also Cape Breton, but in that year these were both constituted separate provinces. Cape Breton was reunited to Nova Scotia in the year 1820, not without considerable opposition on the part of the inhabitants.

The representative institutions conferred upon the two Canadas by the Act of 1791 quickened political life in both provinces and stimulated emigration from the United States. After a time a demand began to be made in both provinces, but less distinctly in the lower than in the upper, for "responsible government."

In the absence of legislative control over executive administration, taxation was excessively unpopular, and without adequate appropriations, public works

could not be undertaken on the scale which the public interest required. In Upper Canada antagonism grew up between the official party, to which the name of "Family Compact" was given, and those who desired more liberal institutions. In Lower Canada a similar condition developed, further embittered by racial feeling. The intentions of the home government were good, but the wants of the provinces were only imperfectly known, and the military governors who were sent out were not, as a rule, fitted to grapple with difficult political situations. The Governments of both Upper and Lower Canada had at their disposal certain revenues collected under an Imperial Customs Act passed in 1774 for the express purpose of providing a permanent means of carrying on the civil government. In both provinces the liberal party demanded that the revenue in question should be

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THE TWO CANADAS IN 1791.

placed under the control of the local legislature. In Upper Canada the matter was amicably arranged; the legislature took over the revenue and in return voted a small permanent civil list. In Lower Canada the legislature took over the revenue as offered by the home government, but refused to vote a civil list. Several years of political conflict ensued, the legislature refusing supplies and the government being obliged to take money from the military chest in order to pay salaries to the public officers. Finally an imperial Act was passed (February 10, 1837) suspending the constitution of Lower Canada and authorizing the application of the provincial funds to necessary purposes.

The War of 1812-15.—In following the course of the internal political development of the country, the present narrative has been carried past a very serious crisis in its earlier history, the war of 1812-15. The causes of the conflict have no connection with Canadian history, but Canada was made the theatre of operations, and Canadian loyalty to the Mother Country was put to a crucial test. The war was opened brilliantly by General Brock in the capture of Detroit, held by an American force much superior to his own (August 16, 1812), and at the battle of Queenston Heights (October 13, 1812), in which an invading force was driven back with heavy loss, but in which the gallant Brock fell. The subsequent course of the struggle was marked by alternate victory and defeat. In two naval battles, lake

Erie (September 10, 1813) and lake Champlain (September 11, 1814), the British fleets sustained serious reverses; while in the engagements of Stoney Creek (June 5, 1813) and Crysler's Farm (November 11, 1813) and the very decisive one of Chateauguay (October 26, 1813), victory rested with the defenders of Canada. The main effect of the war, which was brought to a close by the Treaty of Ghent (December 24, 1814), was to strengthen British sentiment in Canada and to give to the Canadians of both provinces an increased sense both of self-reliance and of confidence in the protection of the Mother Country. Lower Canada suffered but little from the depredations of the enemy. Upper Canada, on the other hand, suffered seriously, her capital, York, having been captured and its public buildings burnt (April, 1813) and a large extent of her frontier devastated. Nevertheless, when Mr. Gore returned to the province in September, 1815, he reported that the country was in a fairly prosperous condition owing to the large amount of ready money which war expenditure had put into circulation.

The Rebellion of 1837 and Lord Durham's Report.—Towards the close of the year 1837, to resume the domestic history of the country, the political disagreements to which reference has been made resulted in attempts at armed rebellion in both the Canadian provinces. These attempts were speedily repressed, especially in Upper Canada, where the insurrection was confined to a comparatively small section of the population, and occurred at a moment when the provincial government, under Sir F. B. Head, was supported by a large majority of the legislative body.

In consequence of these troubles, the Home Government decided to send out a special commissioner to make a thorough investigation, not only in Upper and Lower Canada, but in all the North American provinces, for all had suffered political restlessness. The person chosen was the Earl of Durham, son-in-law of the second Earl Grey, a man of marked ability and of advanced liberal views. His Lordship arrived at Quebec on May 29, 1838, commissioned as governor-general of the whole of British North America. His stay in the country lasted only five months, but he was, nevertheless, able to lay before the British Government in January, 1839, an exhaustive report, dealing principally with the affairs of the Canadas. He recognized that the time had come for granting a larger measure of political independence to both provinces, and, without indicating the scope he was prepared to allow to the principle, made it clear that in his opinion the chief remedy to be applied was " responsible government ". This, however, was to be conditional on a reunion of the provinces as a means of balancing the two races into which the population of Canada was divided, and of procuring as far as possible their harmonious co-operation in working out the destinies of the country. The imperial authorities approved the suggestion, which, however, they recognized as involving very considerable difficulty. Lord Durham might have been entrusted with the duty of carrying it into effect had he not given up his commission on account of the criticism to which some of his plans had been subjected in the British Parliament. The man designated for the task was Charles Poulett Thomson, afterwards raised to the peerage as Baron Sydenham and Toronto.

Thomson arrived at Quebec in October, 1839, and applied himself vigorously to his task, the most difficult part of which was to render the proposition acceptable to the province of Upper Canada, already in full possession of its constitutional rights. The constitution of Lower Canada, as already mentioned, had been suspended, and had been replaced by the appointment of a special council with limited powers. After strenuous negotiations, Thomson succeeded in meeting

certain demands of the western province, and, as the council in Lower Canada was favourable to the scheme, he was able to draft a Bill which, with a few modifications, was enacted by the Home Government in 1840. General elections were held in February, 1841, and the legislature of the united provinces met in June. On September 3, Robert Baldwin, representing the constituency of North York, proposed certain resolutions which were carried with little or no opposition, affirming the principle of responsible government.

The United Provinces under Responsible Government.—The French Canadians were almost without exception opposed to the union, and it was therefore impossible at the time to obtain their co-operation in the formation of a ministry. Sir Charles Bagot (Lord Sydenham had died in September, 1841) fully recognized, as had his predecessor, that the situation was a most unsatisfactory one; moreover, he saw how easily a combination might at any moment be formed with the French Canadian vote in the assembly to defeat his government. He saw, indeed, such a combination on the point of being formed, and resolved to ask Mr. Lafontaine, the most influential French Canadian in the house, to take cabinet office. On condition that Baldwin should be taken in at the same time and that one or two other changes should be made in the cabinet, Lafontaine accepted the proposal, and the matter was arranged accordingly. The government so formed may be regarded as the first Canadian Ministry in the usual acceptation of the word.

Sir Charles Bagot's successor, Sir Charles Metcalfe, had a misunderstanding with his ministers on a question of patronage and with one exception they resigned. A general election followed, with the result that the Governor-General was overwhelmingly sustained in Upper Canada, while Lower Canada gave an almost equal majority in favour of the late government. The Draper-Viger government, which now came into power, had a most precarious support in the assembly, and in the general election of January, 1848, Lord Elgin being Governor-General at the time, Baldwin and Lafontaine were restored to office by a large majority. A leading member of their government was Mr. (afterwards Sir) Francis Hincks, who occupied the post of Inspector General, or, as he would to-day be designated, Finance Minister. Baldwin and Lafontaine having both retired in 1851, the Government was reconstructed, with Hincks as Prime Minister and A. N. Morin as leader of the Lower Canada section.

Much useful legislation must be credited to the Baldwin-Lafontaine ministry. The session of 1849 alone produced the Judicature Act, the Municipal Corporations Act, which gave Canada a workable system of local government substantially the same as that which exists to-day, the Act for amending the charter of the University of Toronto and enlarging the basis of that institution, an Amnesty Act, which enabled any hitherto unpardoned rebels of 1837-8 to return to the country, and the Rebellion Losses Act. The latter Act, though carefully framed to exclude any payments to persons who had actively participated in the rebellion, was represented by certain opponents of the government as designed to recompense such persons, and its signature by Lord Elgin was followed by rioting in Montreal, then the seat of government. The Governor-General was mobbed as he drove through the streets, and the legislative buildings were set on fire and totally destroyed (April 25, 1849). One result was the removal of the seat of government to Toronto in the fall of the same year and the adoption of a system by which that city and Quebec were alternately to be the seat of government. The Hincks ministry was chiefly remarkable for the steps taken to develop a railway system in Canada and for the adoption of a Reciprocity Treaty between Canada and the United States.

In the making of this treaty Lord Elgin took the deepest interest, and it was largel due his skilful diplomacy and unusual powers of persuasion that the negotiations proved successful. Hincks himself visited Washington and argued the case in papers submitted to Congress. The treaty was undoubtedly beneficial to Canada, particularly when the outbreak of the American Civil War in 1861 caused a greatly increased demand for farm products of every kind.

Although the union of the provinces and the introduction of responsible government gave a new stimulus to the political and social life of Canada, grave political difficulties were not long in developing. The differences between the eastern and western sections of the province were very marked and any political party which rested mainly on the votes of either section was sure to incur keen opposition in the other. The Draper-Viger government, formed by Sir Charles Metcalfe, rested mainly on Upper Canada votes; the Baldwin-Lafontaine government, which followed, rested mainly on Lower Canada votes. The Act of Union had given equal representation in the Assembly—forty-two members—to each section of the province. Lower Canada at the time had the larger population; but owing to immigration, the census of 1851 showed a balance in favour of Upper Canada. An agitation then sprang up in the west for representation by population, but the demand was stoutly resisted by Lower Canada. The Hincks government was defeated in 1854 by a combination of Conservatives and Reformers, and was succeeded in September of that year by a coalition under the premiership of Sir Allan MacNab. Under the new government, two very important measures were carried,—the secularization of the clergy reserves, which for over twenty years had been a subject of contention in the country, and the abolition of what was known in Lower Canada as seigneurial tenure. Both were progressive measures, and the first was as strongly approved in Upper Canada as the second in Lower Canada.

In 1855, the seat of government, which had been removed from Toronto to Quebec in the fall of 1851, was again transferred to the former city, where it remained till the summer of 1859. In December, 1857, the question of a permanent seat of government was decided in favour of Ottawa by Her Majesty Queen Victoria, to whom it had been left by a vote of the Canadian Parliament.

In 1856 Mr. (afterwards Sir) John A. Macdonald, who, as Attorney General for the West, had been the most influential member of the coalition government, succeeded to the premiership, after ill-health had compelled the retirement of Sir Allan MacNab. Party spirit from this time onwards ran very high. Although a certain section of the Reformers had supported the coalition government, the bulk of the party remained in opposition under the leadership of George Brown, whose policy, while it won him many adherents in Upper Canada, had an opposite effect in Lower Canada, and thus arrayed the two sections of the province against each other.

Improvements in Transportation.—Considerable progress was meanwhile being made in the material development of the country. Even before the union, some important steps had been taken towards the development of a canal system. The Lachine canal was opened for traffic in 1825; the Welland canal in 1829; the Rideau canal, constructed entirely at the expense of the home government, in 1832, and the Burlington canal, which made Hamilton a lake port, in the same year. An appropriation was made by the legislature of Upper Canada in 1832 for the Cornwall canal, but various causes interfered with the progress of the work, and it was not till the end of the year 1842 that it was completed. Further developments

and improvements of the canal system followed, and the progress in this respect has been continuous to the present day. The total expenditure on canals in Canada down to Confederation is officially estimated at $20,962,244.

The first steam railway in Canada was opened in 1837, between Laprairie, at the foot of the Lachine rapids on the south shore of the St. Lawrence, and St. Johns, on the Richelieu river, supplying a link in the railway and water communication between Montreal and New York. In 1847 a line was opened between Montreal and Lachine. The 'fifties were, however, pre-eminently the period of railway expansion in pre-Confederation times. In 1853 and 1854 the Great Western railway was opened from Niagara Falls to Hamilton, London and Windsor. In 1853 communication was completed between Montreal and Island Pond, establishing connection with a line from that place to Portland, and in 1854 the line was opened between Quebec and Richmond, thus giving railway communication between Quebec and Montreal. In December, 1855, communication was established between Hamilton and Toronto, and in 1856, by the Grand Trunk railway, between Montreal and Toronto. The Northern railway from Toronto to Collingwood was completed in 1855 and the Buffalo and Lake Huron railway between Fort Erie and Goderich in 1858, though sections of it had been completed and operated earlier.

River and lake navigation developed steadily from the year 1809, when the "Accommodation," a steamer owned by John Molson of Montreal, began to ply between Montreal and Quebec. The year 1816 saw the "Frontenac" launched in lake Ontario. Year by year larger and faster vessels were placed on our inland waters, the chief promoters of steamboat enterprises being in Upper Canada, the Hon. John Hamilton of Kingston and in Lower Canada, the Hon. John Molson. A large and powerful steamboat interest had been created by the middle 'fifties when the competition of the Grand Trunk railway gave a serious blow to lake and river transportation.

It was in the 'fifties also that steam navigation was established between Canada and Great Britain. Mr. (afterwards Sir) Hugh Allan, of Montreal was the pioneer in this important enterprise. As early as 1853 some vessels of about 1,200 tons capacity were placed upon the route between Montreal and Liverpool, and in 1855 a mail contract was assigned to the Allan firm for a fortnightly service. The early history of this enterprise was marked by an unparalleled and most discouraging series of disasters; but with unflagging courage the owners of the Allan line held to their task, repaired their losses as best they could, and gradually succeeded in giving the service a high character for regularity and safety.

The Genesis of Confederation.[1]—The idea of a federation of the British provinces in North America had been mooted at various times. It had been hinted at in the discussion in the House of Commons on the Constitutional or Canada Act in 1791. William Lyon Mackenzie suggested it in 1825, and Lord Durham had given it his consideration, but was led to believe it impracticable in his time. The idea was taken up and strongly advocated by the British American League, a short-lived political organization of a conservative character formed at Montreal in 1849, with branches in other cities. In 1851 the question was brought before the legislature, but a motion for an address to the Queen on the subject only secured seven votes. In 1858, however, a strong speech in its favour was made by Mr. (afterwards Sir) A. T. Galt. Macdonald's government was defeated in 1858 but was reconstructed under Cartier with union of the

[1]For a more detailed account of the Confederation negotiations, see Sir Joseph Pope's article, "The Story of Confederation," in the 1918 Year Book, pp. 1-13.

provinces as its policy. The political situation in Great Britain was not favourable to any decisive action at the time, and some years elapsed before the question was taken up in a practical manner.

Towards the close of the year 1861 the country had been greatly excited over the Trent difficulty with the United States. At one moment war between Great Britain and the republic seemed imminent. It was doubtless under the influence of the national feeling thus aroused, that the government led by Cartier introduced a Militia Bill of very wide scope. The government at this time was receiving an extremely precarious support; and on their Militia Bill they sustained a decisive defeat, largely owing to the unpopularity of the measure in Lower Canada. Upon the resignation of Cartier and his colleagues, J. S. Macdonald was entrusted with the task of forming a government. Two short-lived administrations followed, when it became apparent that parliamentary government in Canada, as it was then constituted, had come to a dead stop. On several fundamental questions there was between eastern and western Canada an antagonism of views which made it impossible for any government to receive adequate support. Thus the idea of a larger union, with a relaxation of the bonds in which Upper and Lower Canada were struggling, forced itself on the attention of the leading men of both parties. The leader in this new path was undoubtedly George Brown, who, early in the session, had been appointed chairman of a committee to consider the best means of remedying the political difficulties referred to. The committee had recommended the adoption of a federative system, either as between Upper and Lower Canada or as between all the British North American colonies. Brown having consented to co-operate, if necessary, with his political opponents to that end, a coalition government was formed under the leadership of J. A. Macdonald, in which Brown accepted the position of President of the Council.

At this very time the three Maritime provinces of Nova Scotia, New Brunswick, and Prince Edward Island were considering the question of a federal union amongst themselves, and had arranged a meeting at Charlottetown in September, 1864, to consider the matter. A delegation from the legislature of Canada attended to place their larger scheme before the Maritime delegates. It was agreed to adjourn the convention to Quebec, there to meet on the 10th October. From the deliberations which then took place sprang the Dominion of Canada as it exists today; for, although the federation as formed by the British North America Act only embraced the provinces of Ontario and Quebec (Upper and Lower Canada), New Brunswick and Nova Scotia, provision was made for taking in the remaining provinces and portions of British North America, as opportunity might offer. The immediate effect of Confederation was to relax the tension between Upper and Lower Canada, and, by providing a wider stage of action, to give a new and enlarged political life to all the provinces thus brought into union.

The political history of New Brunswick and Nova Scotia in the period preceding Confederation ran parallel in many respects with that of Upper and Lower Canada. As already mentioned, New Brunswick became a separate province in 1784. Its first Legislative Assembly, consisting of twenty-six members, met at Fredericton in January, 1785. It was to be expected that the home authorities, dealing with sparse populations scattered over the vast extents of territory acquired by British arms, should have provided for them institutions and methods of administration to some extent of a paternal character. It was natural too that the point of view should in the first place be the imperial one. As result two conflicting tendencies arose, the tendency of the strictly colonial system to consolidate itself and to form

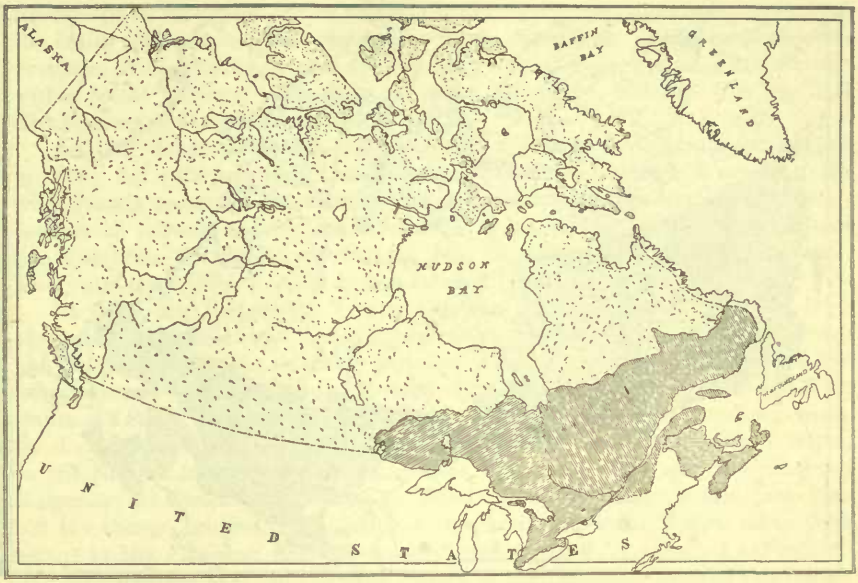
vested interests, and the tendency of increasing population to demand for the people a fuller measure of political initiative and a well defined responsibility of the government to the electors. The main difference between the Maritime provinces and the Canadas in this respect was that, while in the latter violent means were employed in order to bring about reforms, in the former, constitutional methods were strictly adhered to. In Nova Scotia, the cause of reform found its strongest champion in Joseph Howe; in New Brunswick the lead was taken by such men as E. B. Chandler and L. A. Wilmot. For all the provinces the full recognition and establishment of the principle of responsible government may be assigned to the years of 1848 and 1849.

The Confederation Agreement and the Extension of Canada.—The principle of representation according to population was put into operation by the British North America Act, so far as the constitution of the elective chamber, henceforward to be called the "House of Commons," was concerned. In the old Canadian Legislature each section of the province returned sixty-five members. The new province of Quebec retained this measure of representation, and the other provinces were allowed representation in the same proportion as sixty-five bore to the population of the province of Quebec. In the upper house, or "Senate," equality of representation was established as between Ontario and Quebec, twenty-four seats being given to each, while New Brunswick and Nova Scotia were allowed twelve each. The debts of the several provinces were equitably provided for, and a payment at so much per head of population was made for provincial expenses out of the federal revenue arising from customs, excise, etc. In the course of a few years, certain financial readjustments which local circumstances seemed to call for were made in the case of both Nova Scotia and New Brunswick.

In the old province of Canada the extinction of the Hudson's Bay Company's claims in Rupert's Land and the Northwest and the acquisition and organization of those vast territories had at different times occupied the attention of the government. In the year 1856 the subject was much debated in the press, and in 1857 Chief Justice Draper was sent to England to discuss the matter. In the speech from the throne in the year following the governor-general said; "Correspondence in relation to the Hudson's Bay Company and its territory will be laid before you. It will be for you to consider the propositions made by Her Majesty's Secretary of State for the Colonies to the company and to weigh well the bearings of these propositions on the interests and rights of Canada. Papers will also be submitted to you showing clearly the steps taken by the provincial government for the assertion of those interests and rights and for their future maintenance."

It was not, however, till after Confederation that definite action was taken. In the first session of the Dominion Parliament an address to the Queen was adopted embodying certain resolutions moved by the Hon. William McDougall. McDougall and Cartier were sent to England to follow the matter up, and after some months of negotiation they succeeded in arranging for the transfer.

The first province formed out of the ceded territory was Manitoba. The apprehensions of the half-breed population that certain rights, regarded by them as prescriptive, would not be duly protected, retarded for some months the accession of the new province to the Dominion. An expeditionary force under Sir Garnet (later Field-Marshal Viscount) Wolseley was sent to the disturbed region, but before its arrival at Fort Garry (September 24, 1870) all opposition had ceased. The date of the legal creation of the province was July 15, 1870, on which date the Northwest Territories were also placed under a territorial government. The



CANADA AT CONFEDERATION IN 1867.
(ONTARIO, QUEBEC, NOVA SCOTIA AND NEW BRUNSWICK).

CANADA IN 1870, SHOWING THE NEW PROVINCE OF MANITOBA AND THE NORTHWEST TERRITORIES AS THEN ORGANIZED.

CANADA IN 1873, SHOWING THE ADDITION OF BRITISH COLUMBIA (1871) AND OF PRINCE EDWARD ISLAND (1873).

CANADA IN 1905, SHOWING THE NEW PROVINCES OF SASKATCHEWAN AND ALBERTA AND THE YUKON TERRITORY.

NOTE.—The political divisions of Canada in 1923 are shown in the coloured map inserted immediately before the table of contents.

subsequent development of the whole western region, the enlargement (twice) of the limits of Manitoba, the creation out of the Northwest Territories of the two provinces of Saskatchewan and Alberta and of the Yukon Territory are matters within recent memory. The maps on pages 73 and 74 illustrate the political development of Canada from 1867 to 1905.

In 1867 British Columbia had a separate provincial Government, established in 1858. After the provincial Legislature had passed resolutions in favour of union with Canada on certain specified conditions, including the construction of a trans-continental railway and the maintenance of a sea service between Victoria and San Francisco, the Pacific province on July 20, 1871, joined the Confederation. Two years later (July 1, 1873) Prince Edward Island also was admitted.

In 1866, the Reciprocity Treaty with the United States of 1854 had been abrogated. The effect was temporarily depressing so far as Canada was concerned, but the main result was to create an active search for other markets, and in the same year a commission, headed by Hon. Wm. McDougall, was sent to the West Indies and South America with that object. In the same year an attack was made by the Fenians, chiefly soldiers from the disbanded armies of the northern states, on the Niagara frontier. In an engagement which took place near the village of Ridgeway, the Canadian volunteers sustained, for their numbers, considerable loss; but the enemy, hearing of the advance of a body of regular troops, made their escape to the American side, where they were arrested by the civil authorities.

An important event in the early history of the Dominion was the negotiation of the Treaty of Washington (1871). The abrogation of the Reciprocity Treaty, had put an end to the fishing rights in British waters which, under that treaty, the Americans had enjoyed. American fishermen were, however, slow to recognize or accept the change, and were bent on enjoying the privileges to which they had grown accustomed. When some of their vessels were seized and confiscated much ill-feeling arose; and, as the Alabama claims were still unsettled, relations between Great Britain and the United States were in a highly unsatisfactory condition.

In these circumstances it was decided to refer the principal matters in dispute between the two countries to a joint commission, consisting of five members from each; the Canadian Prime Minister, Sir John A. Macdonald, was appointed as a member on the British side in order that the interests of Canada might have full representation. The Commission accomplished some useful work, inasmuch as it provided a means for the settlement of the Alabama claims and of the San Juan question; but while the Canadian Parliament ratified the clauses relating to Canadian interests, the feeling was general that those interests had in a measure been sacrificed. The fisheries were to be thrown open to the Americans for a period of ten years, and a commission was to decide as to the compensation to be paid to Canada for the privilege. The Americans were to have free navigation of the St. Lawrence and the use of the Canadian canals on the same terms as Canadians, while the latter were to have the free navigation of lake Michigan. It had been hoped that some compensation might be obtained for losses inflicted by the Fenians, but the Americans refused absolutely to entertain the proposition.

The government that was formed to carry Confederation underwent an important change before that event took place. George Brown resigned in the month of December, 1865, the assigned reason being that he could not agree with his colleagues as to the expediency of pushing negotiations with the government at Washington on the subject of reciprocity. Later, when Confederation had been fully accomplished, a political question arose, namely, whether or not the govern-

ment should retain its coalition character. Sir John Macdonald was desirous of retaining his Reform colleagues, while Brown held that they should retire; they decided to remain.

The first election under Confederation gave the Government a decided majority. The second, held in 1872, was again favourable to the Government, though its popularity had been somewhat lessened by the dissatisfaction with the Treaty of Washington, ratified the year before. Revelations made in 1873, as to the means by which election funds had been obtained by the government brought on a Cabinet crisis. To avoid impending defeat in the House of Commons, Sir John Macdonald resigned (November 5, 1873) and Alexander Mackenzie, the recognized leader of the opposition, was called upon to form a government. A general election held early in the following year gave a large majority to the new administration.

The Canadian Pacific and Intercolonial Railways.—The agreement with British Columbia was that the transcontinental railway should be begun within two years after its becoming a province of the Dominion and the question was engaging the attention of Sir John Macdonald's Government in 1872, when an Act was passed defining the conditions on which a contracting company might construct the line. The change of Government involved to some extent a change of policy on the railway question, but the defeat of the Mackenzie Government in September, 1878, threw the conduct of the enterprise again into the hands of Macdonald. The plan first adopted was that the railway should be built in sections by the government, but the difficulties involved were such that in 1880 the work was turned over to a syndicate which undertook to form a company to build a road from a point near North Bay, Ont., to the Pacific, for a cash payment of $25,000,000 and 25,000,000 acres of land in what was known as the " Fertile Belt ". The contract embraced other points which cannot be detailed. Certain sections of the line which the Government had already built, or was building, were also turned over to the company. This was the origin of the Canadian Pacific Railway Company, which has since become one of the most powerful corporations in the world, controlling 13,442 miles of railway. The last spike on the main line was driven on November 7, 1885.

In connection with Confederation a guarantee had been given by the Imperial Government of a loan of £3,000,000 sterling towards the construction of the Intercolonial railway. There was considerable delay in the construction of this line, which was not opened through its entire length till the year 1876. That year was further marked by the establishment of the Supreme Court of Canada as a court of appeal from provincial jurisdictions. In the following year an International Commission, created under the terms of the Treaty of Washington to determine the amount to be paid to Canada for the ten years' concession made to the United States in the matter of fisheries, gave an award known as the Halifax award of $5,500,000 in favour of Canada.

The National Policy.—The change of Government in 1878 was generally recognized as due to a growing feeling in favour of a protective policy for Canada, a policy which the Conservative party had adopted, but to which the Liberal leader, Mackenzie, was strongly opposed. A tariff, which may be taken as constituting the first phase of what has since been known as the " National Policy," was introduced by the then Finance Minister, Sir Leonard Tilley, in the session of 1879, the effect of which was to raise the customs duties to an average of about 30 per cent. The first tariff adopted under Confederation, while establishing free trade among the provinces, had imposed duties averaging 15 per cent on all goods

from abroad. This had been increased to 17½ per cent during the Liberal *régime*, which had coincided, in the main, with a period of great financial depression. The new tariff was thus a decided step in the direction of protection, and was held to be justified by its effect on the trade of the country.

The year 1880 was marked by the transfer to Canada by Imperial Order in Council of all British possessions on the North American continent not previously specifically ceded. In the same year the Canadian Academy of Arts was established and in the following year the Royal Society of Canada, both of which have been influential in promoting the cultural life of the Dominion.

Reference has been made to certain troubles incident to the organization of a government for the province of Manitoba in 1869-70. After a lapse of fifteen years the same elements in the population which had then resisted the political change again broke out into open rebellion (March, 1885) in the Prince Albert district of the territory of Saskatchewan. Militia regiments were despatched from eastern provinces under the command of General Sir F. Middleton, and order was completely restored but not without some loss of life. The same year witnessed the completion of the Canadian Pacific railway, the last spike having been driven by Sir Donald A. Smith (later Lord Strathcona and Mount Royal) at a point called Craigellachie on November 7. Canada now possessed within her territory a line from ocean to ocean, though the first through train from Montreal to Vancouver did not pass over the line till the month of June following.

General elections were held in the years 1882, 1887 and 1891, and on each occasion the Government of the day was sustained. On the last occasion, Sir John Macdonald, with his accustomed energy, threw himself into the campaign at a very inclement season of the year, but the strain was too great for his years and, when parliament met on April 29, he was in visibly impaired health. On June 6, 1891, he died, aged 76. By common consent he had done much to shape the political history of Canada. His gifts as leader and statesman were acknowledged not less freely by opponents than by his supporters. He was succeeded as premier by Sir John Abbot, who had only held the position for a year and a half when the state of his health compelled him to retire. Sir John Thompson, who succeeded him, reconstructed the Government but died while in England on public business in 1894.

Three Conservative premiers had now died in the space of three years and a half. Sir Mackenzie Bowell was then placed at the head of an administration in which certain elements of disunion soon began to manifest themselves, as a result of which Sir Mackenzie, on April 27, 1896, yielded the reins of Government of Sir Charles Tupper, who had for some years been filling the office of High Commissioner for Canada in London. A question relating to the public schools of Manitoba had now become acute. Upon the establishment of the province a system of "separate schools" was organized under which the control of Catholic schools was left in the hands of the Catholic section of a general school board. The cancelling of this arrangement in 1890 led to protests and a demand for the "remedial legislation" provided for by the British North America Act in cases in which educational rights enjoyed by any section of the population before Confederation were abridged or disturbed by subsequent legislation. The Privy Council, to whom the case had finally been appealed, decided that such remedial legislation was called for, and the Dominion Government was consequently under obligation to introduce it. The question was much discussed before and during the general election of June, 1896, but to what extent it influenced the result is doubtful. The Government sustained a decisive defeat (June 23, 1896).

The Period of Rapid Development.—The death of Sir John Macdonald had been followed within a year by that of the Hon. Alexander Mackenzie (April 17, 1892). The latter had not, however, been leader of the Liberal party for the last five years of his life, the Hon. (afterwards Sir) Wilfrid Laurier having been elevated to that position after the general election of 1887. On the accession to office of his Government on July 13, 1896, it was recognized that the business of the country had adapted itself to the measure of protection provided and that any abrupt change would be unwise. One of the earliest measures adopted was the reduction by one-fourth of the customs duties charged upon articles the growth, produce, or manufacture of the United Kingdom, or of certain specified British colonies, or of any others, the customs tariff of which was as favourable to Canada as the proposed preferential tariff to the colonies in question. An impediment to the immediate carrying into effect of this arrangement was found in the existence of certain commercial treaties made by Great Britain with Germany and Belgium; after this difficulty had been removed by the denunciation of the treaties in question, the reduced inter-Imperial tariff went into operation on August 1, 1898. From the application of this tariff, wines, spirituous liquors and tobacco were excepted. This "British Preference," as it was called, was further increased to one-third in the year 1900, but in 1904 this method of granting a preference was abandoned in favour of a specially low rate of duty on almost all imported dutiable commodities.

In a general election which took place on December 7, 1900, the Government was sustained. Shortly afterwards Queen Victoria died and was succeeded by King Edward VII (January 22, 1901). It had been suggested by the Colonial Secretary (Mr. Chamberlain), at the accession of the King, that advantage should be taken of the presence in London of the premiers and probably other ministers of the self-governing colonies of the Empire, on the occasion of the coronation, to discuss various matters of imperial import, and a conference at which he presided was opened on June 30 and remained in session till August 11. At this conference a number of important resolutions were adopted, including one recognizing the principle of preferential trade within the Empire and favouring its extension, and another recommending the reduction of postage on newspapers and periodicals between different parts of the Empire, to which effect was subsequently given.

The development of Canada during the last twenty years, in population, commerce and industry has been very marked, and has been especially conspicuous in her western provinces. The Northwest Territories, which at first were governed from Winnipeg—the Lieutenant-Governor of Manitoba being also Lieutenant-Governor of the territories—were organized as the provisional districts of Assiniboia, Saskatchewan, Alberta and Athabaska on May 17, 1882, under a Lieutenant-Governor of their own and with the seat of government at Regina. With the growth of population they rapidly advanced towards provincial status, and on September, 1905, the four territories were organized as the two provinces of Saskatchewan and Alberta, with capitals at Regina and Edmonton respectively. Their subsequent progress has been even more remarkable, owing to the large volume of population they have annually received both from the United States and from European countries, in addition to settlers from eastern Canada. The discovery of gold in the Yukon country led to its organization as the Yukon Territory (June 13, 1898), and as such it returns a member to the House of Commons. The mining of gold and silver in Canada led to the establishment at Ottawa (January 2, 1908) of a branch of the Royal Mint, where gold, silver, nickel and copper coins are struck for circulation in the Dominion.

Two very important arbitrations in which Canada was much interested have taken place since 1890, the first relating to the rights possessed by British subjects in the seal fisheries of Behring sea, and the second as to the boundary between Alaska (purchased by the United States from Russia in 1867) and Canada. In the first case the claims advanced, mainly on behalf of Canada by Great Britain, were fully upheld (September, 1893). In the second there was some disappointment in Canada over the award (October, 1903), which did not, however, in any serious degree affect Canadian interests.

Canada's Part in the South African War.—In the year 1899, the difficulties which had arisen between the British government and the Transvaal, on the subject of the legal disabilities under which British subjects in that country were labouring, resulted in a declaration of war by the Republic. Sympathy with the Mother Country became so acute in Canada—as also in New Zealand and Australia—that the Government felt impelled to take a share in the struggle by sending Canadian troops to the scene of action. A first contingent of the Royal Canadian Regiment left Quebec on the steamer Sardinian on October 30, 1899. Others of this force followed, numbering in all 1,150 officers and men, while Mounted Rifles, Royal Canadian Dragoons and an artillery corps were also despatched to the front. In addition, Lord Strathcona sent out, at his own expense, a special mounted force of 597 officers and men. A total of 3,092 officers and men were despatched to South Africa in the years 1899 and 1900. The Canadian troops distinguished themselves by their bravery, particularly in the battle of Paardeberg (February 27, 1900) in which the Boer general, Cronje, was forced to surrender. In 1901 there was a further enlistment in Canada of Mounted Rifles to the number of 900, at the expense of the Imperial Government, and also of 1,200 men for service in the South African constabulary.

Conclusion.—Politically, during the greater part of the pre-war period, Canada remained under the Government of Sir Wilfrid Laurier, which, however, was defeated in 1911 on the issue of freer trade relations with the United States. The succeeding Conservative Government, under Sir Robert L. Borden, held office during the earlier part of the Great War, but toward its close broadened out to include Liberals who believed in the application of a measure of conscription to reinforce the Canadians at the front. The Union Government, still under Sir Robert Borden, was sustained at the election of December, 1917, and remained in office throughout the remainder of the war and demobilization period, but the Liberals who had consented in a great emergency to support it, one by one retraced their steps. Finally, the increasing weakness of the Government led its new leader, Mr. Arthur Meighen, to appeal to the country, which, in December, 1921, returned to power the Liberals under Mr. Mackenzie King, who had succeeded Sir Wilfrid Laurier as Liberal leader on the death of the latter in 1919. A notable feature of the election was the return to the House of Commons of 65 Progressive members, mainly agriculturists from Ontario and the Prairie provinces, their number considerably exceeding that of the Conservatives in the new Parliament.

Economically, the period between 1900 and the outbreak of the war was one of rapid expansion, owing largely to the great influx of immigrant labour (see subsection "Immigration"), and of capital, the total outside capital invested in Canada in 1914 being estimated at $3,500,000,000, nearly 80 p.c. of which was British. This capital was largely invested in the construction of the new transcontinental railways, which had been enabled to secure it partly through the guaranteeing of their bonds by Dominion and Provincial Governments. The

untimely ending of the rapid growth period owing to the war, revealed that these railways could not meet their obligations, and the result was nationalization along the lines of the Drayton-Acworth report. (See sub-section "Steam Railways").

During and since the war, investments in Canada by the capitalists of the United States have greatly increased and at the commencement of 1923 Canada's total indebtedness to the outside world has been estimated at $5,250,000,000, about $2,750,000,000 to the United Kingdom and $2,500,000,000 to the United States. But while indebtedness has thus increased, national wealth and national income have grown at least proportionately with these obligations to the people of other countries. Our intelligent and industrious population can still face the future with confidence.

The history of Canada has now been covered in briefest outline down to the commencement of the war. The history of the war and Canada's part in it was dealt with in the leading article of the 1919 Year Book; the story of reconstruction in Canada has been summarized in the leading article of the 1920 Year Book; a description of the changes brought about by the war in the imperial and international status of Canada will be found in the next section of the present volume; to these articles the interested reader is referred.

II.—CHRONOLOGICAL HISTORY OF CANADA, 1497 to 1923.

1497. June 24, Eastern coast of North America discovered by John Cabot.
1498. Cabot discovers Hudson strait.
1501. Gaspar Corte Real visits Newfoundland and Labrador.
1524. Verrazano explores the coast of Nova Scotia.
1534. June 21, Landing of Jacques Cartier at Esquimaux bay.
1535. Cartier's second voyage. He ascends the St. Lawrence to Stadacona (Quebec), (Sept. 14), and Hochelaga (Montreal), (Oct. 2).
1541. Cartier's third voyage.
1542-3. De Roberval and his party winter at Cap Rouge, and are rescued by Cartier on his fourth voyage.
1557. Sept. 1, Death of Cartier at St.Malo, France.
1592. Straits of Juan de Fuca discovered by de Fuca.
1603. June 22, Champlain's first landing in Canada, at Quebec.
1605. Founding of Port Royal (Annapolis, N.S.).
1608. Champlain's second visit. July 3, Founding of Quebec.
1609. July, Champlain discovers lake Champlain.
1610-11. Hudson explores Hudson bay and James bay.
1611. Brulé ascends the Ottawa river.
1612. Oct. 15, Champlain made lieutenant-general of New France.
1613. June, Champlain ascends the Ottawa river.
1615. Champlain explores lakes Nipissing, Huron and Ontario. (Discovered by Brulé and Le Caron).
1616. First schools opened at Three Rivers and Tadoussac.
1620. Population of Quebec, 60 persons.
1621. Code of laws issued, and register of births, deaths and marriages opened in Quebec.
1622. Lake Superior discovered by Brulé.
1623. First British settlement of Nova Scotia.
1627. New France and Acadia granted to the Company of 100 Associates.
1628. Port Royal taken by Sir David Kirke.
1629. April 24, Treaty of Susa between France and England. July 20, Quebec taken by Sir David Kirke.
1632. March 29, Canada and Acadia restored to France by the Treaty of St. Germain-en-Laye.
1633. May 23, Champlain made first governor of New France.
1634. July 4, Founding of Three Rivers.
1634-35. Exploration of the Great Lakes by Nicolet.
1635. Dec. 25, Death of Champlain at Quebec.
1638. June 11, First recorded earthquake in Canada.
1640. Discovery of lake Erie by Chaumonot and Brébeuf.
1641. Resident population of New France, 240.
1642. May 17, founding of Ville-Marie (Montreal).
1646. Exploration of the Saguenay by Dablon.
1647. Lake St. John discovered by de Quen.

1648. March 5, Council of New France created.
1649. March 16-17, Murder of Fathers Brébeuf and Lalemant by Indians.
1654. Aug., Acadia taken by an expedition from New England.
1655. Nov. 3, Acadia restored to France by the Treaty of Westminster.
1659. June 16, François de Laval arrives in Canada as Vicar-Apostolic.
1660. May 21, Dollard des Ormeaux and sixteen companions killed at the Long Sault, Ottawa river.
1663. Company of 100 Associates dissolved. Feb. 5, severe earthquake. April, Sovereign Council of New France established. Population of New France, 2,500, of whom 800 were in Quebec.
1664. May, Company of the West Indies founded.
1665. Mar. 23, Talon appointed intendant. Population of New France, 3,215.
1667. July 21, Acadia restored to France by the Treaty of Breda. White population of New France, 3,918.
1668. Mission at Sault Ste. Marie founded by Marquette.
1670. May 13, Charter of the Hudson's Bay Company granted.
1671. Population of Acadia, 441.
1672. Population of New France, 6,705. April 6, Comte de Frontenac governor.
1673. June 13, Cataraqui (Kingston) founded.
1674. Oct. 1, Laval becomes first Bishop of Quebec.
1675. Population of New France, 7,832.
1678. Niagara Falls visited by Hennepin.
1679. Ship *Le Griffon* built on Niagara river above the falls by La Salle. Population of New France, 9,400; of Acadia, 515.
1682. Frontenac recalled.
1683. Population of New France, 10,251.
1685. Card money issued.
1686. Population of New France, 12,373; of Acadia, 885.
1687. March 18, La Salle assassinated.
1689. June 7, Frontenac reappointed governor. Aug. 5, Massacre of whites by Indians at Lachine.
1690. May 21, Sir William Phipps captures Port Royal, but is repulsed in an attack on Quebec (Oct. 16-21).
1691. Kelsey, of the Hudson's Bay Co., reaches the Rocky Mountains.
1692. Population of New France, 12,431. Oct. 22, Defence of Verchères against Indians by Magdeleine de Verchères.
1693. Population of Acadia, 1,009.
1697. Sept. 20, by the Treaty of Ryswick, places taken during the war are mutually restored. D'Iberville defeats the Hudson's Bay Co.'s ships on Hudson Bay.
1698. Nov. 28, Death of Frontenac. Population of New France, 15,355.
1703. June 16, Sovereign Council of Canada becomes Superior Council and membership increased from 7 to 12.
1706. Population of New France, 16,417.
1709. British invasion of Canada.
1710. Oct. 13, Port Royal taken by Nicholson.
1711. Sept. 1, Part of Sir H. Walker's fleet, proceeding against Quebec, wrecked off the Seven Islands.
1713. April 11, Treaty of Utrecht; Hudson bay, Acadia and Newfoundland ceded to Great Britain. Aug., Louisbourg founded by the French. Population of New France, 18,119.
1720. Population of New France, 24,234, of Isle St. Jean (P.E.I.), about 100. April 25, Governor and Council of Nova Scotia appointed.
1721. June 19, burning of about one half of Montreal.
1727. Population of New France, 30,613.
1728. Population of Isle St. Jean (P.E.I.), 330.
1731. Population of the north of the peninsula of Acadia, 6,000.
1734. Road opened from Quebec to Montreal. Population of New France, 37,716.
1737. Iron smelted at St. Maurice. French population of the north of the Acadia peninsula, 7,598.
1739. Population of New France, 42,701.
1745. June 17, Taking of Louisbourg by Pepperell and Warren.
1747. Marquis de La Jonquière appointed governor, captured at sea by the English, took office Aug. 15, 1749.
1748. Oct. 18, Treaty of Aix-la-Chapelle. Louisbourg restored to France in exchange for Madras.
1749. June 21, Founding of Halifax. British immigrants brought to Nova Scotia by Governor Cornwallis, 2,544 persons. Fort Rouillé (Toronto) built.
1750. St. Paul's Church, Halifax (oldest Anglican church in Canada) built.
1752. March 25, Issue of the Halifax "Gazette," first paper in Canada. British and German population of Nova Scotia, 4,203. May 17, Death of La Jonquière.
1754. Population of New France, 55,009.
1755. July 10, Marquis de Vaudreuil-Cavagnal governor. Sept. 10, Expulsion of the Acadians from Nova Scotia.
1756. Seven Years' War between Great Britain and France.
1758. July 26, Final capture of Louisbourg by the British. Oct. 7, First meeting of the Legislature of Nova Scotia.
1759. July 25, Taking of Fort Niagara by the British. July 26, Beginning of the Siege of Quebec. July 31, French victory at Beauport Flats. Sept. 13, Defeat of the

French on the Plains of Abraham. Death of Wolfe. Sept. 14, Death of Montcalm. Sept. 18, Surrender of Quebec.

1760. April 28, Victory of the French under Levis at Ste. Foy. Sept. 8, Surrender of Montreal. Military rule set up in Canada. Population of New France, 70,000.

1762. British population of Nova Scotia, 8,104. First British settlement in New Brunswick.

1763. Feb. 10, Treaty of Paris by which Canada and its dependencies are ceded to the British. May, Rising of Indians under Pontiac, who take a number of forts and defeat the British at Bloody Run (July 31). Oct. 7, Civil government proclaimed. Cape Breton and Isle St. Jean annexed to Nova Scotia; Labrador, Anticosti and Magdalen islands to Newfoundland. Nov. 21, General Jas. Murray appointed governor in chief. First Canadian post offices established at Montreal, Three Rivers and Quebec.

1764. June 21, First issue of the Quebec "Gazette." Aug. 13, Civil government established.

1765. Publication of the first book printed in Canada, "Catéchisme du Diocèse de Sens." May 18, Montreal nearly destroyed by fire. Population of Canada, 69,810.

1766. July 24, Peace made with Pontiac at Oswego.

1768. Charlottetown, P.E.I. founded. April 11, Great fire at Montreal. April 12, Sir Guy Carleton (Lord Dorchester) governor in chief.

1769. Isle St. Jean (Prince Edward Island) separated from Nova Scotia, with governor and council.

1770–72. Hearne's journey to the Coppermine and Slave rivers and Great Slave lake.

1773. Suppression of the order of Jesuits in Canada and escheat of their estates.

1774. June 22, The Quebec Act passed.

1775. May 1, The Quebec Act comes into force. Outbreak of the American Revolution. Montgomery and Arnold invade Canada. Nov. 12, Montgomery takes Montreal; Dec. 31, is defeated and killed in an attack on Quebec.

1776. The Americans are defeated and driven from Canada by Carleton.

1777. Sept. 18, General Frederick Haldimand governor in chief.

1778. Captain Jas. Cook explores Nootka sound and claims the northwest coast of America for Great Britain. June 3, First issue of the Montreal "Gazette."

1783. Sept. 3, Treaty of Versailles, recognizing the independence of the United States. Organization of the Northwest Company at Montreal. Kingston, Ont., and St. John, N.B., founded by United Empire Loyalists.

1784. Population of Canada, 113,012. Aug. 16, New Brunswick and (Aug. 26) Cape Breton separated from Nova Scotia.

1785. May 18, Incorporation of Parrtown (St. John, N.B.).

1786. April 22, Lord Dorchester again governor in chief. Oct. 23; Government of New Brunswick moved from St. John to Fredericton.

1787. C. Inglis appointed Anglican bishop of Nova Scotia—first colonial bishopric in the British Empire.

1788. King's College, Windsor, N.S. opened. Sailing packet service established between Great Britain and Halifax.

1789. Quebec and Halifax Agricultural Societies established.

1790. Spain surrenders her exclusive rights on the Pacific coast. Population of Canada, 161,311. (This census does not include what becomes in the next year Upper Canada.)

1791. The Constitutional Act divides the province of Quebec into Upper and Lower Canada, each with a lieutenant-governor and legislature. The Act goes into force Dec. 26. Sept. 12, Colonel J. G. Simcoe, first lieutenant-governor of Upper Canada.

1792. Sept. 17, First legislature of Upper Canada opened at Newark (Niagara). Dec. 17, First legislature of Lower Canada opened at Quebec. Vancouver island circumnavigated by Vancouver.

1793. April 18, First issue of the "Upper Canada Gazette." June 28, Jacob Mountain appointed first Anglican bishop of Quebec. July 9, Importation of slaves into Upper Canada forbidden. Rocky Mountains crossed by (Sir) Alexander Mackenzie. York (Toronto) founded by Simcoe.

1794. Nov. 19, Jay's Treaty between Great Britain and the United States.

1795. Pacific Coast of Canada finally given up by the Spaniards.

1796. Government of Upper Canada moved from Niagara to York (Toronto).

1798. St. John's Island (population 4,500) re-named Prince Edward Island.

1800. Founding of New Brunswick College, Fredericton (now University of N.B.). The Rocky Mountains crossed by David Thompson.

1803. Settlers sent by Lord Selkirk to Prince Edward Island.

1806. Nov. 22, Issue of "Le Canadien"—first wholly French newspaper. Population—Upper Canada, 70,718; Lower Canada, 250,000; New Brunswick, 35,000; P.E.I., 9,676.

1807. Simon Fraser explores the Fraser river. Estimated population of Nova Scotia, 65,000.
1809. Nov. 4, First Canadian steamer runs from Montreal to Quebec.
1811. Lord Selkirk's Red River settlement founded, on land granted by Hudson's Bay Company.
1812. June 18, Declaration of war by the United States. July 12, Americans under Hull cross the Detroit river. Aug. 16, Detroit surrendered by Hull to Brock. Oct. 13, Defeat of the Americans at Queenston Heights and death of Gen. Brock.
1813. Jan. 22, British victory at Frenchtown. April 27, York (Toronto) taken and burned by the Americans. June 5, British victory at Stoney Creek. June 24, British, warned by Laura Secord, captured an American force at Beaver Dams. Sept. 10, Commodore Perry destroys the British flotilla on lake Erie. Oct. 5, Americans under Harrison defeat the British at Moraviantown. Tecumseh killed. Oct. 26, Victory of French-Canadian troops under de Salaberry at Chateauguay. Nov. 11, Defeat of the Americans at Crysler's Farm. British storm Fort Niagara and burn Buffalo.
1814. March 30, Americans repulsed at La Colle. May 6, Capture of Oswego by the British. July 5, American victory at Chippawa. July 25, British victory at Lundy's Lane. July, British from Nova Scotia invade and occupy northern Maine. Sept. 11, British defeat at Plattsburg on lake Champlain. Dec. 24, Treaty of Ghent ends the war. Population — Upper Canada, 95,000; Lower Canada, 335,000.
1815. July 3, Treaty of London regulates trade with the United States. The Red River settlement destroyed by the Northwest Company but restored by Governor Semple.
1816. June 19, Governor Semple killed. The Red River settlement again destroyed.
1817. July 18, First treaty with the Northwest Indians. Lord Selkirk restores the Red River settlement. Opening of the Bank of Montreal; first note issued Oct. 1. Population of Nova Scotia, 81,351.
1818. Oct. 20, Convention at London regulating North American fisheries. Dalhousie College, Halifax, founded. Bank of Quebec founded.
1819–22. Franklin's overland Arctic expedition.
1820. Oct. 16, Cape Breton re-annexed to Nova Scotia.
1821. March 26, The Northwest Company absorbed by the Hudson's Bay Company. Charter given to McGill College.
1822. Population of Lower Canada, 427,465.
1824. Population of Upper Canada, 150,066; of New Brunswick, 74,176.
1825. Oct. 6, Great fire in the Miramichi district, N.B. Opening of the Lachine canal. Population of Lower Canada, 479,288.
1826. Founding of Bytown (Ottawa).
1827. Sept. 29, Convention of London relating to the territory west of the Rocky mountains. Population of Nova Scotia, including Cape Breton, 123,630.
1828. The Methodist Church of Upper Canada separated from that of the United States.
1829. Nov. 27, First Welland canal opened. Upper Canada College founded.
1831. June 1, The North Magnetic Pole discovered by (Sir) James Ross. Population — Upper Canada, 236,702; Lower Canada, 553,131; Assiniboia, 2,390.
1832. Outbreak of cholera in Canada. Incorporation of Quebec and Montreal. Bank of Nova Scotia founded. May 30, opening of the Rideau canal.
1833. Aug. 18, The steamer *Royal William*, built at Quebec, leaves Pictou for England.
1834. Feb. 21, The Ninety-two Resolutions on public grievances passed by the Assembly of Lower Canada. Mar. 6, Incorporation of Toronto. Population of Upper Canada, 321,145; of New Brunswick, 119,457; of Assiniboia, 3,356.
1836. July 21, Opening of the first railway in Canada from Laprairie to St. John's, Que. Victoria University opened at Cobourg (afterwards moved to Toronto).
1837. Report of the Canada Commissioners. Rebellions in Lower Canada (Papineau) and Upper Canada (W. L. Mackenzie). Nov. 23, Gas lighting first used in Montreal.
1838. Feb. 10, Constitution of Lower Canada suspended and Special Council created. March 30, The Earl of Durham governor in chief. April 27, Martial law revoked. June 28, Amnesty to political prisoners proclaimed. Nov. 1, Lord Durham, censured by British parliament, resigns. Population—Upper Canada, 339,422; Assiniboia, 3,966; Nova Scotia, 202,575.
1839. Feb. 11, Lord Durham's report submitted to parliament. John Strachan made first Anglican bishop of Toronto.
1840. July 23, Passing of the Act of Union. First ship of the Cunard line arrives at Halifax. July 28, death of Lord Durham.

1841. Feb. 10, Union of the two provinces as the province of Canada, with Kingston as capital. Feb. 13, Draper-Ogden administration. April 10, Halifax incorporated. June 13, Meeting of first united Parliament. Sept. 19, Death of Lord Sydenham. Population of Upper Canada, 455,688; of P.E.I., 47,042.

1842. March 10, Opening of Queen's University, Kingston. Aug. 9, The Ashburton Treaty. Sept. 16, Baldwin-Lafontaine administration.

1843. June 4, Victoria, B.C. founded. Dec. 12, Draper-Viger administration. King's (now University) College, Toronto, opened.

1844. May 10, Capital moved from Kingston to Montreal. Knox College, Toronto, founded. Population of Lower Canada, 697,084.

1845. May 28 and June 28, Great fires at Quebec. Franklin starts on his last Arctic expedition.

1846. May 18, Kingston incorporated. June 15, Oregon Boundary Treaty. June 18, Draper-Papineau administration.

1847. May 29, Sherwood-Papineau administration. Electric telegraph service opened; Aug. 3, Montreal to Toronto; Oct. 2, Montreal to Quebec. Nov. 25, Montreal-Lachine railway opened.

1848. March 11, Lafontaine-Baldwin administration. May 30, Fredericton incorporated. Responsible government granted to Nova Scotia and New Brunswick.

1849. April 25, Signing of the Rebellion Losses Act, rioting in Montreal and burning of the Parliament buildings. Nov. 14, Toronto made the Capital. Vancouver island granted to the Hudson's Bay Company. Population of Assiniboia, 5,391.

1851. April 6, Transfer of the postal system from the British to the Provincial Government; uniform rate of postage introduced. April 23, Postage stamps issued. Aug. 2, Incorporation of Trinity College, Toronto. Sept. 22, Quebec becomes the Capital. Oct. 28, Hincks-Morin administration. Responsible government granted to Prince Edward Island. Population — Upper Canada, 952,004; Lower Canada, 890,261; New Brunswick, 193,800; Nova Scotia, 276,854.

1852. July 8, Great fire at Montreal. Dec. 8, Laval University, Quebec, opened. The Grand Trunk railway chartered.

1854. June 5, Reciprocity Treaty with the United States. Sept. 11, MacNab-Morin ministry. Seigneurial tenure in Lower Canada abolished. Secularization of the clergy reserves.

1855. Jan. 1, Incorporation of Ottawa. Jan. 27, MacNab-Taché administration. March 9, Opening of the Niagara suspension bridge. April 17, Incorporation of Charlottetown. Oct. 20, Government moved to Toronto.

1856. The Legislative Council of Canada is made elective. First meeting of the legislature of Vancouver island. May 24, Taché-J. A. Macdonald administration. Oct. 27, Opening of the Grand Trunk railway from Montreal to Toronto. Population of Assiniboia, 6,691.

1857. Nov. 26, J. A. Macdonald-Cartier administration. Dec. 31, Ottawa chosen by Queen Victoria as future capital of Canada.

1858. Feb., Discovery of gold in Fraser River valley. July 1, Introduction of Canadian decimal currency. Aug. 2, Brown-Dorion administration. Aug. 5, Completion of the Atlantic cable; first message sent. Aug. 6, Cartier-J. A. Macdonald administration. Aug. 20, Colony of British Columbia established. Control of Vancouver island surrendered by the Hudson's Bay Company.

1859. Jan., Canadian silver coinage issued. Sept. 24, Government moved to Quebec.

1860. Aug. 8, The Prince of Wales (King Edward VII) arrives at Quebec. Sept. 1, Laying of the corner stone of the Parliament buildings at Ottawa by the Prince of Wales. Prince of Wales College, Charlottetown, founded.

1861. Aug. 14, Great flood at Montreal. Sept. 10, Meeting of the first Anglican provincial synod. Population — Upper Canada, 1,396,091; Lower Canada, 1,111,566; New Brunswick, 252,047; Nova Scotia, 330,857; Prince Edward Island, 80,857.

1862. May 24, Sandfield Macdonald-Sicotte administration. Aug. 2, Victoria, B.C., incorporated.

1863. May 16, Sandfield Macdonald-Dorion administration.

1864. March 30, Taché-J. A. Macdonald administration. Conferences on confederation of British North America; Sept. 1, at Charlottetown; Oct. 10-29, at Quebec. Oct. 19, Raid of American Confederates from Canada on St. Albans, Vermont.

1865. Feb. 3, The Canadian Legislature resolves on an address to the Queen praying for union of the provinces of British North America. Aug. 7, Belleau-J. A. Macdonald administration. Oct. 20, Proclamation fixing the seat of government at Ottawa.

1866. Mar. 17, Termination of the Reciprocity Treaty by the United States. May 31, Raid of Fenians from the United States into Can-

ada; they are defeated at Ridgeway (June 2) and retreat across the border (June 3). June 8, First meeting at Ottawa of the Canadian legislature. Nov. 17, Proclamation of the union of Vancouver island to British Columbia.

1867. March 29, Royal assent given to the British North America Act. July 1, The Act comes into force; Union of the provinces of Canada, Nova Scotia and New Brunswick as the Dominion of Canada; Upper and Lower Canada made separate provinces as Ontario and Quebec; Viscount Monck first governor general, Sir John A. Macdonald premier. Nov. 6, Meeting of the first Dominion Parliament.

1868. April 7, Murder of D'Arcy McGee at Ottawa. July 31, The Rupert's Land Act authorizes the acquisition by the Dominion of the Northwest Territories.

1869. June 22, Act providing for the government of the Northwest Territories. Nov. 19, Deed of surrender to the Crown of the Hudson's Bay Company's territorial rights in the Northwest . Outbreak of the Red River Rebellion under Riel.

1870. May 12, Act to establish the province of Manitoba. July 15, Northwest Territories transferred to the Dominion and Manitoba admitted into Confederation. Sept. 24, Wolseley's expedition reaches Fort Garry (Winnipeg); end of the rebellion.

1871. April 2, First Dominion census (populations at this and succeeding enumerations given in section on population). April 14, Act establishing uniform currency in the Dominion. May 8, Treaty of Washington, dealing with questions outstanding between the United Kingdom and United States. July 20, British Columbia enters Confederation.

1873. March 5, Opening of the second Dominion Parliament. May 23, Act establishing the Northwest Mounted Police. July 1, Prince Edward Island enters Confederation. Nov. 7, Alexander Mackenzie premier. Nov. 8, Incorporation of Winnipeg.

1874. March 26, Opening of the third Dominion Parliament. May, Ontario Agricultural College, Guelph, opened.

1875. April 8, The Northwest Territories Act establishes a Lieutenant-Governor and Council of the Northwest Territories. June 15, Formation of the Presbyterian Church of Canada.

1876. June 1, Opening of the Royal Military College, Kingston. June 5, First sitting of the Supreme Court of Canada. July 3, Opening of the Intercolonial Railway from Quebec to Halifax.

1877. June 20, Great fire at St. John, N.B. Oct., First exportation of wheat from Manitoba to the United Kingdom. Founding of the University of Manitoba.

1878. July 1, Canada joins the International Postal Union. Oct. 17, Sir J. A. Macdonald premier.

1879. Feb. 13, Opening of the fourth Dominion Parliament. May 15, Adoption of a protective tariff ("The National Policy").

1880. Royal Canadian Academy of Arts founded, first meeting and exhibition, March 6. May 11, Sir A. T. Galt appointed first Canadian High Commissioner in London. Sept. 1, All British possessions in North America and adjacent islands, except Newfoundland and its dependencies, annexed to Canada by Imperial Order in Council of July 31. Oct. 21, Signing of the contract for the construction of the Canadian Pacific railway.

1881. April 4, Second Dominion census. May 2, First sod turned of the Canadian Pacific railway.

1882. May 8, Provisional Districts of Assiniboia, Saskatchewan, Athabaska and Alberta formed. May 25, First meeting of the Royal Society of Canada. Aug. 23, Regina established as seat of government of Northwest Territories.

1883. Feb. 1, Opening of the fifth Dominion Parliament. Sept. 5, Formation of the Methodist Church in Canada; United Conference.

1884. May 24, Sir Charles Tupper High Commissioner in London. Aug. 11, Order in Council settling the boundary of Ontario and Manitoba.

1885. March 26, Outbreak of Riel's second rebellion in the Northwest. April 24, Engagement at Fish Creek. May 2, Engagement at Cut Knife. May 12, Taking of Batoche. May 16, Surrender of Riel. Aug. 24, First census of the Northwest Territories. Nov. 16, Execution of Riel.

1886. April 6, Incorporation of Vancouver. June 7, Archbishop Taschereau of Quebec made first Canadian cardinal. June 13, Vancouver destroyed by fire. June 28, First through train on the Canadian Pacific railway from Montreal to Vancouver. July 31, First quinquennial census of Manitoba.

1887. Interprovincial Conference at Quebec. April 4, First Intercolonial Conference in London. April 13, Opening of the sixth Dominion Parliament.

1888. Feb. 15, Signing of Fishery Treaty between United Kingdom and United States at Washington.

Aug., Rejection of Fishery Treaty by United States Senate.

1890. March 31, The Manitoba School Act abolishes separate schools.

1891. April 5, Third Dominion census. April 29, Opening of the seventh Dominion Parliament. June 6, Death of Sir J. A. Macdonald. June 15, Sir John Abbott premier.

1892. Feb. 29, Washington Treaty, providing for arbitration of the Behring Sea Seal Fisheries question. July 22, Boundary convention between Canada and the United States. Nov. 25, Sir John Thompson premier.

1893. April 4, First sitting of the Behring Sea Arbitration Court. Dec. 18, Archbishop Machray, of Rupert's Land, elected first Anglican primate of all Canada.

1894. June 28, Colonial Conference at Ottawa. Dec. 12, Death of Sir John Thompson at Windsor Castle. Dec. 21, (Sir) Mackenzie Bowell premier.

1895. Sept. 10, Opening of new Sault Ste. Marie canal. Oct. 2, Proclamation naming the Ungava, Franklin, Mackenzie and Yukon districts of Northwest Territories.

1896. April 24, Sir Donald Smith (Lord Strathcona) High Commissioner in London. April 27, Sir Charles Tupper premier. July 11, (Sir) Wilfrid Laurier premier. Aug., Gold discovered in the Klondyke. Aug. 19, Opening of the eighth Dominion Parliament.

1897. July, Third Colonial Conference in London. Dec. 17, Award of the Behring Sea Arbitration.

1898. June 13, The Yukon district established as a separate territory. Aug. 1, The British Preferential Tariff of Canada goes into force. Aug. 23, Meeting at Quebec of the Joint High Commission between Canada and the United States. Dec. 25, British Imperial Penny (2 cent) Postage introduced.

1899. Oct. 11, Beginning of the South African war. Oct. 29, First Canadian Contingent leaves Quebec for South Africa.

1900. Feb. 27, Battle of Paardeberg. April 26, Great fire at Ottawa and Hull.

1901. Jan. 22, Death of Queen Victoria and accession of King Edward VII. Feb. 6, Opening of the ninth Dominion Parliament. April 1, Fourth Dominion census. Sept. 16-Oct. 21, Visit to Canada of the Duke and Duchess of Cornwall and York (King George V and Queen Mary).

1902. May 31, End of South African War, peace signed at Vereeniging. June 30, Meeting of fourth Colonial Conference in London.

1903. Jan. 24, Signing of the Alaska Boundary Convention. June 19, Incorporation of Regina. Oct. 20, Award of the Alaskan Boundary Commission.

1904. Feb. 1, Dominion Railway Commission established. April 19, Great fire in Toronto. Oct. 8, Incorporation of Edmonton.

1905. Jan. 11, Opening of the tenth Dominion Parliament. Sept. 1, Creation of the provinces of Alberta and Saskatchewan.

1906. University of Alberta founded. Oct. 8, Interprovincial Conference at Ottawa.

1907. March 22, Industrial Disputes Investigation Act passed. April 15-May 14, Fifth Colonial Conference in London. New customs tariff including introduction of intermediate tariff. Sept. 19, New Commercial Convention with France signed at Paris. Oct. 17, First message by wireless telegraphy between Canada and the United Kingdom. University of Saskatchewan founded.

1908. Jan. 2, Establishment of Ottawa branch of Royal Mint. April 11, Arbitration treaty between United Kingdom and United States. May 4, Ratification of Treaty for demarcation of boundary between Canada and United States. June 21-23, Bicentenary of Bishop Laval celebrated at Quebec. July 20-31, Quebec tercentenary celebrations: visit to Quebec of Prince of Wales. Aug. 2, Great fire in Kootenay Valley, B.C. University of British Columbia founded.

1909. Jan. 11, Signing of International Boundary Waters Convention between Canada and United States. Jan. 20, opening of 11th Dominion Parliament. May 19, Appointment of Canadian Commission of Conservation. July 28, Conference on Imperial Defence in London.

1910. May 4, Passing of Naval Service Bill. May 6, Death of King Edward VII and accession of King George V. June 7, Death of Goldwin Smith. Sept. 7, North Atlantic Coast Fisheries Arbitration award of the Hague Tribunal. New trade agreement made with Germany, Belgium, Holland and Italy.

1911. May 23-June 20, Imperial Conference in London. June 1, Fifth Dominion census. July 11, Disastrous fires in Porcupine district. Sept. 21, General election. Oct. 10, (Sir) R. L. Borden premier. Oct. 11, Inauguration at Kitchener of Ontario Hydro-Electric Power Transmission System. Nov. 15, Opening of 12th Dominion Parliament.

1912. April 15, Loss of the steamship *Titanic*. April 15, Appointment of Dominions Royal Commission.

May 15, Extension of the boundaries of Quebec, Ontario and Manitoba. June 17, Judgment delivered by the Imperial Privy Council on the marriage question raised by the *ne temere* decree.

1913. April 10, Japanese Treaty Act assented to. June 2, Trade agreement with West Indies came into force.

1914. Jan. 21, Death of Lord Strathcona and Mount Royal, aged 94. May 29, Loss of the steamship *Empress of Ireland*. Aug. 4, war with Germany; Aug. 12, with Austria-Hungary; Nov. 5, with Turkey. Aug. 18-22, Special war session of Canadian Parliament. Oct. 16, First Canadian contingent of over 33,000 troops land at Plymouth, Eng.

1915. Feb., First Canadian contingent lands in France and proceeds to Flanders. April 22, Second battle of Ypres. April 24, Battle of St. Julien. May 20-26, Battle of Festubert. June 15, Battle of Givenchy; gallantry of Canadian troops highly eulogized by F.-M. Sir John French. Oct. 30, Death of Sir Charles Tupper. Nov. 22, Issue of Canadian War Loan of $50,000,000. Nov. 30, War loan increased to $100,000,000.

1916. Jan. 12, Order in Council authorizing increase in number of Canadian troops to 500,000. Feb. 3, Destruction of the Houses of Parliament at Ottawa by fire. April 3-20, Battle of St. Eloi. June 1, Census of prairie provinces. June 1-3, Battle of Sanctuary Wood. Sept. 1, Cornerstone of new Houses of Parliament laid by Duke of Connaught. Sept., Issue of second war loan, $100,000,000.

1917. Feb. 12-May 15, Visit to England of Prime Minister and colleagues for Imperial Conference. Feb. 21, Final Report of Dominions Royal Commission. March, Third war loan, $150,000,000. March 20-May 2, Meetings in London of Imperial War Cabinet. March 21-April 27, Imperial War Conference. April 5, Declaration of war against Germany by United States. April 9, Capture of Vimy Ridge. June 21, Appointment of Food Controller. Aug. 15, Battle of Loos, capture of Hill 70. Aug. 29, Passing of Military Service Act. Sept. 20, Completion of Quebec bridge. Sept. 20, Parliamentary franchise extended to women. Dominion Government authorized to purchase 600,000 shares of C.N.R. stock. Oct. 26-Nov. 10, Battle of Passchendaele. Nov. 12, Fourth war loan (Victory Bonds). Dec. 6, Disastrous explosion at Halifax, N.S., Dec. 17, General election and Union Government sustained.

1918. Mar. 18, Opening of first session of 13th Parliament. Mar. 21, Germans launch critical offensive on west front. Mar.-April, Second battle of the Somme. April 17, Secret session of Parliament. June-July Prime Minister and colleagues attend Imperial War Conference in London. July 18, Allies assume successful offensive on west front. Aug. 12, Battle of Amiens. Aug. 26-28, Capture of Monchy le Preux. Sept. 2-4, Breaking of Drocourt-Quéant line. Sept. 16, Austrian peace note. Sept. 27-29, Capture of Bourlon Wood. Sept. 30, Bulgaria surrenders and signs armistice. Oct. 1-9, Capture of Cambrai. Oct., Serious influenza epidemic. Oct. 6, First German peace note. Oct. 20, Capture of Denain. Oct. 25-Nov. 2, Capture of Valenciennes. Oct. 28, Issue of fifth war loan for $300,000,000 in the form of Victory Bonds. Oct. 31, Turkey surrenders and signs armistice. Nov. 4, Austria-Hungary surrenders and signs armistice. Nov. 10, Flight into Holland of German Emperor. Capture of Mons. Nov. 11, Germany surrenders and signs armistice.

1919. Feb. 17, Death of Sir Wilfrid Laurier. Feb. 20-July 7, Second session of 13th Parliament of Canada. Mar. 7, Appointment of government receiver of the Grand Trunk Pacific railway. May 1-June 15, Great strike at Winnipeg and other western cities. June 23, General election in Quebec, and retention of Liberal administration. June 28, Signing at Versailles of Peace Treaty and Protocol. July 24, General election in Prince Edward Island and defeat of Conservative administration. Aug. 5, Election of Right Hon. W. L. Mackenzie King as leader of Liberal party in Canada. Aug. 15, Arrival of H. R. H. the Prince of Wales for official tour in Canada. Aug. 22, Formal opening of Quebec Bridge by H.R.H. the Prince of Wales. Sept. 1, H.R.H. the Prince of Wales lays foundation stone of tower of new Parliament Buildings at Ottawa. Sept. 1-Nov. 10, Third or special peace session of 13th Parliament of Canada. Sept. 15, Opening at Ottawa of the National Industrial Conference. Oct. 20, General election in Ontario, and formation of ministry by E. C. Drury, United Farmers' Organization. Issue of sixth war loan for $300,000,000 in the form of Victory Bonds. Dec. 20, Organization of "Canadian National Railways" by Order in Council.

1920. Jan. 10, Ratifications of the Treaty of Versailles. Feb. 19, Shareholders ratify agreement for sale

of the Grand Trunk railway to the Dominion Government. Feb. 26-July 1, Fourth session of the thirteenth Parliament of Canada. May 31-June 18, Trade Conference at Ottawa between Dominion and West Indian Governments. June 7-19, Convention of American Federation of Labour at Montreal. June 29, Provincial general election in Manitoba, Liberal government retained in office. July 10, Sir Robert Borden is succeeded by Right Hon. Arthur Meighen as Premier. July 16, Ratifications of the Treaty of St. Germain-en-Laye. July 27, Provincial general election in Nova Scotia, Liberal government sustained. Aug. 5-7, Imperial Press Conference at Ottawa. Aug. 9, Ratifications of the Treaty of Neuilly-sur-Seine. Sept. 18-23, Ninth Congress of Chambers of Commerce of the Empire at Toronto. Oct. 9, Provincial general election in New Brunswick, Liberal government is sustained. Oct. 20, Prohibition defeated in British Columbia. Oct. 25 Referendum *re* complete prohibition of the liquor traffic is carried in Nova Scotia, Manitoba, Saskatchewan and Alberta. Nov. 15, First meeting of League of Nations Assembly begins at Geneva, Switzerland. Dec. 1, Provincial general election in British Columbia, Liberal government is sustained.

1921. Feb. 14-June 4, Fifth Session of Thirteenth Parliament of Canada. April 18, Ontario votes for prohibition of the manufacture, importation and sale of alcoholic liquors. May 1, Government control of liquor traffic becomes effective in Quebec. May 10, Preferential tariff arrangement with British West Indies becomes effective. June 20-August 5, Imperial Conference at which Canada is represented by Rt. Hon. Arthur Meighen. June 9, At general election in Saskatchewan, Liberal government is sustained. July 18, At general election in Alberta, the United Farmers secure majority of seats. Sept. 5-Oct. 5, Second meeting of Assembly of League of Nations at Geneva; Canada represented by Rt. Hon. C. J. Doherty. Nov. 11, Opening of conference on limitation of armament at Washington, Sir Robt. Borden representing Canada. Dec. 6, Dominion general election. Dec. 29, New ministry (Liberal), with Right Hon. W. L. Mackenzie King as premier, is sworn in.

1922. Feb. 1, Arms Conference at Washington approves 5-power treaty limiting capital fighting ships and pledging against unrestricted submarine warfare and use of poison gas. Feb. 10, Hon. P. C. Larkin appointed High Commissioner for Canada in the United Kingdom. Mar. 19, Vilhjalmur Stefansson announces taking possession of Wrangell island in Sept., 1921. April 10, General Economic Conference opened at Genoa, Sir Chas. B. Gordon representing Canada. July 13, Conference between Canada and the United States *re* perpetuating the Rush-Bagot Treaty regarding armament on the Great Lakes. Aug. 2, Alexander Graham Bell, inventor of the telephone, died. Aug. 7, Allies' Conference on war debts and reparations opened at London. Sept. 4, Third assembly of League of Nations opened at Geneva. Oct. 4, Order in Council consolidating separate lines in Canadian National Railway system and appointing new board of directors. Oct. 5, Serious forest fires in northern Ontario; town of Haileybury destroyed. Oct. 10, Mudania Armistice signed by Britain, France and Turkey. Oct. 14, Fourth International Labour Conference at Geneva. Nov. 20, Turkish Peace Conference opened at Lausanne. Dec. 4, Opening of First International Postal Conference at Ottawa, between representatives of the United States and Canada. Dec. 6, Irish Free State inaugurated as one of the Dominions in the British Empire. Dec. 9, Reparations Conference opened at London. Dec. 15, Signing of trade agreement between Canada and France, Hon. W. S. Fielding and Hon. E. Lapointe representing Canada. Passing of Act by Imperial parliament removing embargo on Canadian cattle.

1923. Jan. 1, National Defence Act, 1922, comes into effect amalgamating Militia, Naval and Air Force departments. Jan. 4, Signing of trade agreement between Canada and Italy, Hon. W. S. Fielding and Hon. E. Lapointe representing Canada. April 1, Removal of British embargo on Canadian cattle effective. June 25, Provincial elections in Ontario; Conservative party under Hon. G. Howard Ferguson returned to power. July 26, Provincial elections in Prince Edward Island; Conservative party under Hon. J. D. Stewart returned to power. Sept. 3, Fourth session of League of Nations at Geneva, Canada represented by Hon. Sir L. Gouin and Hon. Geo. P. Graham. Oct. 1, Imperial Conference and Imperial Economic Conference at London. Canada represented at the former by Rt. Hon. W. L. Mackenzie King.

III.—THE CONSTITUTION AND GENERAL GOVERNMENT OF CANADA.[1]

The Dominion of Canada is the largest in area and the most populous of the great self-governing Dominions of the British Empire, which also include the Commonwealth of Australia, the Union of South Africa, the Dominion of New Zealand and the island colony of Newfoundland (with Labrador). These Dominions enjoy responsible government of the British type, administered by Executive Councils (or Cabinets) acting as advisors to the representative of the Sovereign, themselves responsible to and possessing the confidence of the representatives elected to Parliament by the people, and giving place to other persons more acceptable to Parliament whenever that confidence is shown to have ceased to exist.

Of these Dominions, Canada, Australia, and South Africa extend over enormous areas of territory, the first two approximating in area to Europe. Each section has its own problems and its own point of view, so that local parliaments for each section ,as well as the central parliament for the whole country, are required. These local parliaments, established when transportation and communication were more difficult and expensive than at present, were chronologically prior to the central body. to which on its formation they either resigned certain powers, as in the case of Australia, or surrendered all their powers with certain specified exceptions, as in Canada and South Africa. Of such local parliaments, Canada at the present time has nine, Australia six and South Africa four.

Besides the Dominions above enumerated, the Irish Free State (Saorstat Eireann) now possesses full Dominion status. The great Empire of India has internationally been accepted as a member of the League of Nations, and in its internal administration has been placed on the road, formerly traversed by the Dominions which are now fully self-governing, towards responsible government. Indeed, the whole evolution of the Empire, throughout all its parts which are more than mere fortresses like Gibraltar or trading stations like Hong Kong, is in the direction of responsible government, to be attained in the dependencies as it has been in what used to be called the colonies, by the gradual extension of self-government in proportion to the growing capacities of their respective populations. It is the recognized aim of British administrators, by the extension of educational facilities and by just administration, to develop these capacities to the utmost, so that in the dependencies, as well as in the Dominions and in the Mother Country, the constitutional history of the future may be a record of "freedom slowly broadening down from precedent to precedent."

It is the purpose of this article to relate as briefly as possible, the process of this development of free government in the Dominion of Canada.

I.—CONSTITUTIONAL DEVELOPMENT OF THE COLONIES PRIOR TO CONFEDERATION.

The French Régime.—The settlement of Canada commenced at a time when the extension of European trade and commerce throughout the world was being mainly carried on by chartered companies of merchants belonging to various nations, more particularly England, France and Holland. These companies each tried to monopolize the trade of the regions in which they established themselves,

[1]Adapted from an article by S. A. Cudmore, M.A., F.S.S., published in the Canada Year Book, 1921.

receiving from their sovereign charters which, theoretically at least, gave them a monopoly so far as their compatriots were concerned, while against foreign competition they maintained their position with the sword, even when their respective mother countries, thousands of miles and months of time distant, were at peace. Among such companies of this period were the English and Dutch East India Companies, the Guinea Company, the Russia Company, the Virginia Company, and a little later, the Hudson's Bay Company. Similarly, we find in the earliest stage of French enterprise in Canada that several short-lived companies successively possessed a monopoly of trade and employed such men as Champlain as governors and explorers of the new territories. The charters of these companies were, however, cancelled for violation of their terms, and at last in 1627, the monopoly of trade and the right to make grants of land was conferred upon the Company of One Hundred Associates, in consideration of its undertaking to settle the country and support missionaries to christianize the Indians. Governmentally, therefore, the first stage in Canadian history may be said to have been the autocratic government of a trading company. This company, however, failed to live up to its agreement and its charter was cancelled in 1663, when Canada became a royal province, governed like an ordinary French province of those days, by a Governor to whom, as personal representative of the King, were entrusted the general policy of the country, the direction of its military affairs and its relations with the Indian tribes. The Bishop, as the head of the Church, was supreme in matters affecting religion and the Intendant, acting under the authority of the King, not of the Governor, was responsible for the administration of justice, for finance and for the direction of local administration. A Superior Council also existed, with certain administrative powers which were more formal than real. This system continued until the end of the French *régime*.

The British Colony.—From the capitulation of Quebec on Sept. 18, 1759, and of Montreal on Sept. 8, 1760, to the signing of the Treaty of Paris on Feb. 10, 1763, Canada was ruled by British military officers who instituted courts which applied French law and administered the country as an occupied territory, the final disposition of which was as yet unsettled.

Upon the final surrender of the country by France under the Treaty of Paris, a Royal Proclamation of Oct. 7, 1763, defined the frontiers of the new province of Quebec, and provided that as soon as circumstances would admit, General Assemblies should be summoned, with power to enact laws for the public welfare and good government of the colony. In the meantime, courts were constituted for "dealing with civil and criminal cases according to the laws of England," with an appeal to the Privy Council. Under the Quebec Act of 1774, passed with the purpose of conciliating the new colonies at a time when the old colonies were falling off from their allegiance, the use of the old French civil law was resumed, while English criminal law continued to govern throughout the province, which was now extended to the banks of the Ohio and the Mississippi. These boundaries were, however, abandoned at the Treaty of Versailles, 1783, when the Great Lakes became the dividing line. The influx of the United Empire Loyalists, English-speaking people accustomed to English laws, necessitated the division of the colony and the establishment of representative institutions. The Constitutional Act was passed in 1791, dividing the Canada of those days (the St. Lawrence valley) into two provinces, establishing in each province a nominated Legislative Council and an elected Legislative Assembly. Under this Act, upon which the government of Canada was based throughout half a century, " the Executive was (through Crown

revenue and military grants from the Home Government) financially, and worse still, constitutionally independent, and the House of Assembly, in seeking vaguely to cure a disease which it had not in reality diagnosed, frequently overstepped its sphere, with the result that it was dissolved time after time."—(Lefroy, Constitutional Law of Canada, pp. 20-21).

The Constitutional Act was at first accepted as an improvement on the previously existing method of government, but as time went on, the increasing population and wealth of the provinces, combined with the narrow and selfish policy of the privileged few, led to frequent clashes between the Executive and the Assembly, complicated in Lower Canada by the difference of races. In 1837, a rebellion in each province, though speedily stamped out, led to the appointment of Lord Durham by the Home Government as a special commissioner clothed with more extensive powers than had ever before been held by a representative of the Crown in British North America.

The famous report made by Lord Durham to the British Government is almost universally regarded as the greatest political document in Canadian history. He saw clearly the necessity of re-establishing harmony between the executive and the legislative branches of the government by making the former, as in the Mother Country, responsible to the latter. He insisted also upon the desirability of establishing a free democratic system of municipal government, by participation in which citizens would secure a training which would be of use in fitting them for the wider duties of public life. Upper and Lower Canada were to be united under a single Parliament, and in the Act provision was to be made for the voluntary admission to the union of the other British North American provinces.

While Lord Durham was disavowed by the Home Government, his report formed the basis of the Act of Union of 1841, which united Upper and Lower Canada under a single Parliament, in which each province was equally represented. This equality of representation in a single Parliament, applied to provinces of differing race, religion and institutions, finally became unworkable; deadlock became the parent of Confederation, under which each province could legislate on its own local affairs, while a common Parliament was established for all the provinces agreeing to enter the federation.

Confederation.—While suggestions for the union of the British North American provinces date as far back as 1789, the first legislative action looking to this end was taken by the Assembly of Nova Scotia in 1861. In 1864 delegates from Nova Scotia, New Brunswick and Prince Edward Island assembled in Charlottetown to confer in reference to a union of these provinces. A second convention at which the province of Canada was represented, met in Quebec on Oct. 10, 1864, at which seventy-two resolutions, which afterwards formed the basis of the British North America Act, were adopted and referred to the respective legislatures for their concurrence, which was finally given. The British North America Act received the Royal Assent on March 29, 1867, and came into force on July 1 of that year.

II.—THE CONSTITUTION OF THE DOMINION AT CONFEDERATION.

Constitution of Canada.—In the preamble to the British North America Act, it is stated that the provinces of Canada, Nova Scotia and New Brunswick "have expressed their desire to be federally united into one Dominion, with a

Constitution similar in principle to that of the United Kingdom." Thus the Canadian constitution is not an imitation of that of the United States; it is the British Constitution federalized. Like the British and unlike the American Constitution, it is not wholly a written constitution. The many unwritten conventions of the British Constitution are also recognized in our own; what we have in the British North America Act is a written delimitation of the respective powers of the Dominion and Provincial Governments, and an enactement of the terms of the Confederation agreement. The British North America Act simply divides the sovereign powers of the State between the provincial and the central authorities.

The British North America Act declares that the executive government of Canada shall continue to be vested in the sovereign of the United Kingdom (sec. 9), represented for federal purposes by the Governor General, as for provincial purposes by the Lieutenant-Governor. The Governor General is advised by the King's Privy Council for Canada, a committee of which constitutes the ministry of the day

The Dominion Parliament consists of the King, the Senate and the House of Commons. It must meet at least once a year, so that twelve months do not elapse between the last meeting in one session and the first meeting in the next. Senators, now 96 in number, appointed for life by the Governor General in Council, must be 30 years of age, British subjects, residents of the province for which they are appointed, and possess $4,000 over and above their liabilities. Members of the House of Commons (235 in 1921, but subject to increase as a result of the census of that year), are elected by the people for the duration of the parliament, which must not be longer than five years.

Dominion Finance.—Among the most important provisions of the British North America Act are those relating to the appropriation of public money and the raising of taxes for Dominion purposes. The House of Commons has the sole right of initiating grants of public money and of directing and limiting appropriations, yet the House of Commons must not (sec. 54) adopt or pass any vote, bill, resolution or address for the payment of any part of the public funds for any purpose that has not first been recommended to the house by message from the Governor General in Council during the session in which such vote or bill is proposed. This rule is of the most vital importance in promoting public economy, as it eliminates all possibility of private members combining to secure expenditures of public money in their constituencies, and leaves to the executive authority the initiation of all legislation requiring the expenditure of public funds; it is also operative in the Provincial Legislatures.

Powers of Parliament.—The powers of the Dominion Parliament include all subjects not assigned exclusively to the provincial legislatures. More especially, under section 91, it has exclusive legislative authority in all matters relating to the following: public debt and property; regulation of trade and commerce; raising of money by any mode of taxation; borrowing of money on the public credit; postal service; census and statistics; militia, military and naval service and defence; fixing and providing for salaries and allowances of the officers of the government; beacons, buoys and lighthouses; navigation and shipping; quarantine and the establishment and maintenance of marine hospitals; sea-coast and inland fisheries; ferries on an international or interprovincial frontier; currency and coinage; banking, incorporation of banks, and issue of paper money; savings banks; weights and measures; bills of exchange and promissory notes; interest; legal tender; bankruptcy and insolvency; patents of invention and discovery; copyrights; Indians

and lands reserved for Indians; naturalization and aliens; marriage and divorce; the criminal law, except the constitution of courts of criminal jurisdiction, but including the procedure in criminal matters; the establishment, maintenance and management of penitentiaries; such classes of subjects as are expressly excepted in the enumeration of the classes of subjects by this Act exclusively assigned to the legislatures of the provinces.[1]

Judicature.—The appointment, salaries and pensions of judges are dealt with under sections 96 to 101. The judges (except in the courts of probate in New Brunswick and Nova Scotia) are appointed by the Dominion Government from the bars of their respective provinces, and hold office during good behaviour, being removable by the Governor General only on address of the Senate and House of Commons. Their salaries are fixed and provided by Parliament.

Under the provisions of section 101, empowering Parliament to establish a general Court of Appeal, the Dominion Parliament passed, in 1875, an Act to establish a Supreme Court and Court of Exchequer for the Dominion (38 Vict., c. 11). In 1877, however, these courts were separated and the Exchequer Court of Canada, with one judge, a registrar, and other proper officers, was established. An additional judge was added to this court in 1912.

The Supreme Court of Canada has appellate jurisdiction from all the courts of the provinces, and questions may be referred to it by the Governor General in Council. It has also jurisdiction in certain cases between the provinces, and in cases of controversies between provinces and the Dominion. While its judgment is final in criminal cases, there is in civil cases, subject to certain limitations, an appeal to the Judicial Committee of the Privy Council in England, which also entertains appeals direct from the provincial Courts of Appeal. The decisions of the Supreme Court and of the Judicial Committee of the Privy Council constitute the case-law of our constitution, the legal interpretation of the constitution and of the varied powers of the Dominion and provincial legislatures.

Finance.—Under Part VIII of the British North America Act, the revenues which had previously accrued to the treasuries of the provinces were transferred to the Dominion, notably the customs duties. The public works, cash assets and other property of the provinces, except lands, mines, minerals and royalties, also became Dominion property. In its turn, the Dominion became responsible for the debts of the provinces. Since the main source of the revenues of the provinces, customs duties, was now taken over by the Dominion, the Dominion was to pay annual subsidies to the provinces for the support of their governments and legislatures. These subsidies have from time to time been increased.

Miscellaneous.—Among the miscellaneous provisions contained in Part IX of the British North America Act, are sections providing for the retention of existing legislation of the provinces in force until repealed, the transfer of existing officials to the Dominion, and the appointment of new officials. The Parliament of Canada was also given power necessary to perform treaty obligations of Canada, as a part of the British Empire, towards foreign countries.

Under section 133, either the English or the French language may be used by any person in the debates of Parliament or of the Legislature of Quebec, all Acts of which bodies are to be printed in both languages. Either language, too, may be used by any person in any court of Canada established under the Act, or in the courts of Quebec.

[1] *Powers of Provincial Legislatures.*—For details of the general powers of Provincial Legislatures in Canada and their special powers in respect of education, as stated in sections 92 and 93 of the British North America Act, see commencement of the sub-section on Provincial and Local Government in Canada.

Veto Power.—Under section 56, it is provided that Acts of the Dominion Parliament, after receiving the assent of the Governor General, may within two years be disallowed by the Sovereign in Council. Similarly Acts of the provincial Legislature, after receiving the assent of the Lieutenant-Governor, may be disallowed within one year by the Governor General in Council.

This veto power on Dominion legislation has practically never been exercised by the Sovereign in Council.[1] In the case of controversies between the Dominion and the provinces, while the veto power has been exercised in the past, the present tendency is to let the matter be decided by the courts rather than disallow by an executive act legislation duly passed by the provincial legislatures. The argument is that if such legislation is annulled as *ultra vires* of the provincial legislature, then the Dominion Government, an executive body, has made itself the judge in its own case, which could be more properly decided by the courts; if legislation, admittedly *intra vires* of the provincial legislature, is annulled, on the ground of its immorality or unwisdom, then the annulling power has set itself up as an authority on morality and wisdom. The Dominion Minister of Justice, in 1909, on the question of disallowing the Ontario legislation with respect to the Hydro-Electric Power Commission, stated the case as follows:—

> "In the opinion of the undersigned, a suggestion of the abuse of power, even so as to amount to practical confiscation of property, or that the exercise of a power has been unwise or indiscreet, should appeal to your Excellency's government with no more effect than it does to the ordinary tribunals, and the remedy in such case is an appeal to those by whom the legislature is elected."

III.—EVOLUTION OF THE NATIONAL CONSTITUTION SINCE CONFEDERATION.[2]

Since no attempt was made in the British North America Act to define the relations between the British and the Canadian Governments, those relations have necessarily passed and are still passing through a stage of gradual development in which they are influenced to a remarkable extent by custom and convention and the creation of "new conventions of the Constitution." From the very commencement of our history as a nation there has been a gradual development of the powers of the Canadian Government, accompanied by a more liberal attitude on the part of British statesmen, largely due to the more advanced ideas of government which have permeated the administration of the mother country itself. In 1876, for example, the then Colonial Secretary proposed to issue permanent instructions to the Governor General providing that the latter should preside at meetings of the Council (a right which in the case of the Sovereign had long fallen into desuetude); that he might dissent from the opinion of the major part of the whole; and that in the exercise of the pardoning power in capital cases, he was to receive the advice of ministers, but to extend or withhold pardon or reprieve according to his own judgment (one of the last prerogatives to disappear in the case of the Sovereign).

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[1] This right has only been exercised in one rather technical case. In 1873 an Act of the Dominion Parliament empowered any committee of the Senate or House of Commons to examine witnesses upon oath when so authorized by resolution. "There was a confusion of opinion as to the competency of Parliament to enact it. The law officers of the United Kingdom eventually advised that the Act was *ultra vires*, and it was accordingly disallowed for that reason and not upon considerations of policy."—Borden, Canadian Constitutional Studies, p. 65.

[2] In this part of the article, considerable use has been made of Sir Robert Borden's recently published volume, "Canadian Constitutional Studies."

The then Canadian Minister of Justice, Hon. Edward Blake, secured in 1878 the issuance of a new set of instructions, in which the only provision that the Governor-General might act except on the advice of Ministers, related to the exercise of the pardoning power, providing that in cases where a pardon or reprieve might affect Imperial interests, the Governor-General should take these interests into his personal consideration in conjunction with the advice of his Ministers.

The development of inter-Imperial relations up to the Great War may be studied in the records of the Colonial Conference. In the first Colonial Conference of 1887, we have a purely consultative gathering in calling which the chief aim of the British Government was to devise a method of more effective co-operation in defence. After a second, but constitutionally unimportant Conference had been held in Ottawa in 1894, the third Colonial Conference, attended only by Prime Ministers, was held in London in 1897, and the fourth, which Dominion Ministers attended to assist their Prime Ministers, in London in 1902. At the latter Conference a resolution was passed favouring the holding of such Conferences at intervals not exceeding four years at which "questions of common interest could be discussed and considered as between the *Colonial Secretary* and the Prime Ministers of the self-governing Colonies." In 1905 the Colonial Secretary, Mr. Lyttleton, suggested to the Dominions that the Colonial Conference should be changed into an Imperial Council, consisting of the Colonial Secretary and the Prime Ministers or their representatives. On Canada objecting to the use of the term "Council" the name was changed to "Imperial Conference." In 1907 the first "Imperial Conference" assembled; by an extraordinarily significant change, it was provided that future Conferences should be between the Government of the United Kingdom and the Governments of the self-governing Dominions, and that the *Prime Minister* of the United Kingdom (not the Colonial Secretary) was to be *ex officio* President of the Conference, while the Prime Ministers of the Dominions and the Colonial Secretary were to be *ex officio* members. This was a move toward recognizing that the Home Government was simply *primus inter pares* among the nations of the Empire. The Conference of 1911 met under this arrangement, and in 1912 the British Government gave Canada an assurance that a Dominion Minister resident in London would be regularly summoned to all meetings of the Committee of Imperial Defence and that no important step in foreign policy would be taken without consultation with such representatives. In 1917 there was evolved what was known as the Imperial War Cabinet, a gathering of the five members of the British War Cabinet and the Prime Ministers of the self-governing Dominions.

A resolution on the question of future constitutional relations passed unanimously at this Conference is of profound significance. It was as follows:—

> "The Imperial War Conference are of opinion that the readjustment of the constitutional relations of the component parts of the Empire is too important and intricate a subject to be dealt with during the war, and that it should form the subject of a special Imperial Conference to be summoned as soon as possible after the cessation of hostilities.
>
> "They deem it their duty, however, to place on record their view that any such readjustment, while thoroughly preserving all domestic affairs, should be based upon a full recognition of the Dominions as autonomous nations of an Imperial Commonwealth, and of India as an important portion of the same, should recognize the right of the Dominions and India to an adequate voice in foreign policy and in foreign relations, and should provide effective arrangements for continuous consultation in all important matters of common Imperial concern, and for such necessary concerted action, founded on consultation, as the several Governments may determine."

In regard to the first paragraph of the above, the 14th resolution of the Conference of 1921 stated that "having regard to the constitutional developments since 1917, no advantage is to be gained by holding a constitutional Conference." This sentence had reference to the consultation of the Dominions in regard to the terms of peace and their membership in the League of Nations. On Oct. 29, 1918, the question of representation of the Dominions in the peace negotiations was raised by the Prime Minister of Canada in a despatch to the Prime Minister of the United Kingdom. The Imperial War Cabinet eventually accepted the proposal, but when the question came before the Peace Conference at Paris on January 12, 1919, strong opposition was encountered, which was finally overcome. Through a combination of the panel system, by which the representatives of the British Empire might be selected from day to day as the nature of the subject demanded, with distinctive representation of each Dominion, the Dominions secured effective representation, and took no inconsiderable part in the Conference.

As a natural development of this representation came the signature by the Dominion plenipotentiaries of the various treaties concluded at the Conference, the submission of these treaties for the approval of the Dominion Parliaments, and the appearance of the Dominions as Signatory Powers. Further, the Dominions claimed that they should be accepted as members of the new League of Nations, and represented on its Council and Assembly. This claim was finally accepted, and the status of the Dominions as to membership and representation in the Assembly is precisely the same as that of other signatory members. As to representation on the Council, the Prime Minister of Canada obtained from President Wilson and Messrs. Clemenceau and Lloyd George, a signed declaration that "upon the true construction of the first and second paragraphs of that Article, representatives of the self-governing Dominions of the British Empire may be selected or named as members of the Council." At the first Assembly of the League of Nations at Geneva, from Nov. 15 to Dec. 18, 1920, Canada was represented by the Rt. Hon. Sir Geo. E. Foster, the Rt. Hon. Chas. Jos. Doherty and Hon. N. W. Rowell, the first of whom acted as a Vice-President of the Assembly.[1]

The participation of Canada in the Peace Treaty and in the League of Nations made it necessary for an official definition of Canadian nationals and Canadian nationality to be made, since among different measures adopted in connection with the operations of the League of Nations, were provisions defining certain rights and privileges to be enjoyed by the nationals of members of the League. A Canadian national was accordingly defined by 11-12 George V, chap. 4, as: (*a*) any British subject who is a Canadian citizen[2] within the meaning of The Immigration Act, chapter 27 of the Statutes of 1910, as heretofore amended; (*b*) the wife of any such person; (*c*) any person born out of Canada, whose father was a Canadian national at the time of that person's birth, or with regard to persons born before the passing of this Act, any person whose father at the time of such birth, possessed all the qualifications of a Canadian national as defined in this Act. In the debates on this Act it was thoroughly established that its effect was not in any way to supersede the term "British subject," but to create a sub-class of "Canadian nationals" within "British subjects."

[1]An account of the proceedings of this first Parliament of the Nations was given on pages 738 to 742 of the 1920 edition of the Year Book.

[2]According to the Immigration Act, 1910, a "Canadian citizen" is

"(i) a person born in Canada who has not become an alien;
(ii) a British subject who has Canadian domicile;
(iii) a person naturalized under the laws of Canada who has not subsequently become an alien or lost Canadian domicile.

A similar advance toward recognition of the existence of a Canadian nation is to be found in the gradual tendency toward direct negotiation instead of negotiation through London with the diplomatic or consular representatives of other powers. For many years the consuls-general of other countries at Ottawa or Montreal, more especially the consuls-general of the United States, Japan, Italy and Germany, discharged diplomatic or semi-diplomatic functions in Canada, and Sir Wilfred Laurier in 1910 considered that while "this has been done without authority and is contrary to the rules that apply among civilized nations, it became a necessity because of the development of the larger colonies of the British Empire, which have become practically nations." Further, Mr. Blake in 1882, Sir Richard Cartwright in 1889, and Mr. Mills in 1892 moved resolutions in favour of Canadian diplomatic representation at Washington, emphasizing the fact that a Canadian diplomatic representative would be an envoy of the Queen, that he would act in co-operation with the British Ambassador at Washington, that he would be in direct communication with the Government of Canada, to whom he would be responsible, and that the growing importance of Canada's relations with the United States made such an appointment desirable. While at that time these proposals were regarded as premature, in 1918, when Canada and the United States were both devoting their energies to the great struggle against a common foe, it was found necessary to establish a Canadian War Mission at Washington, which in effect, though not in form, was a diplomatic mission. This brought to a head the question of Canadian diplomatic representation at Washington; the authorities in London were consulted, with the result that on May 10, 1920, it was announced to Parliament that "it has been agreed that his Majesty on advice of his Canadian ministers, shall appoint a Minister Plenipotentiary who will have charge of Canadian affairs and will at all times be the ordinary channel of communication with the United States Government in matters of purely Canadian concern, acting upon instructions from, and reporting direct to the Canadian Government. In the absence of the Ambassador, the Canadian Minister will take charge of the whole embassy and of the representation of Imperial as well as Canadian interests. He will be accredited by His Majesty to the President with the necessary powers for the purpose. This new arrangement will not denote any departure either on the part of the British Government or of the Canadian Government from the principle of the diplomatic unity of the British Empire." The principle involved in this arrangement had, as a matter of fact, already been accepted in the appointment of the International Joint Commission. Up to October, 1923, however, no Canadian Minister to Washington had been appointed.

Negotiation of Treaties.—The right to negotiate commercial and other treaties has been developing almost from the beginning. In 1871, the Prime Minister of Canada, Sir John A. Macdonald, became one of the British commissioners acting under instructions from the British Government, at the conference that resulted in the Treaty of Washington. This dual function, however, he found a very difficult one. In 1874, Hon. Geo. Brown was associated with the British Minister at Washington for the purpose of negotiating a commercial treaty between Canada and the United States. In 1878, Sir A. T. Galt, later High Commissioner, was commissioned to undertake negotiations with France and Spain for better commercial relations, these negotiations, however, to be conducted by the British Ambassador. In 1884, the High Commissioner for Canada, Sir Charles Tupper, in conjunction with the British Ambassador to Spain, was given full powers to conduct negotiations for a commercial treaty between Canada and Spain, the

negotiations to be conducted by Sir Charles Tupper and the convention to be signed by both plenipotentiaries. In 1891, the Canadian Parliament petitioned for the denunciation of the commercial treaties with the German Zollverein and Belgium, which prevented Canada from extending preferential treatment to British products. The Canadian tariff of 1897 provided for the grant of preferential treatment to British goods, and at the Colonial Conference of that year, the Premiers of the self-governing colonies unanimously recommended "the denunciation at the earliest convenient time of any treaties which now hamper the commercial relations between Great Britain and her colonies." The treaties were accordingly denounced. In 1907, Mr. Fielding and Mr. Brodeur negotiated a commercial convention between Canada and France, and in 1911, the negotiations regarding reciprocity with the United States were carried on directly between the Government of Canada and the government of the United States. In 1914, the Arbitration Treaty concluded between the British Empire and the United States, made provision that in case the British interests affected were mainly those of some one or other of the self-governing Dominions, the minister of the International Commission of Arbitration chosen from the British Empire might be selected from the Dominion principally interested. In December, 1918, commissioners were appointed by Canada and the United States to make a joint inquiry into fisheries questions arising between the two countries. As a result, a treaty looking to the preservation of the Pacific coast fisheries was signed by the Commissioners, but failed to secure ratification by the United States Senate.

Defence.—As early as 1862 the Government of Canada, following British precedents, successfully asserted the principle that the raising and maintenance of Canadian military forces were subject to the absolute control of the representatives of the Canadian people. During the South African war, the last of the British garrisons was temporarily, and in 1905, permanently withdrawn and the defence of the naval stations at Halifax and Esquimalt was taken over by the Canadian Permanent Force. When on the outbreak of war in 1914 Canadian forces were sent overseas, an important constitutional question was the sufficiency of Canadian legislation for the control and discipline of the forces when outside the Dominion. However, the Governor in Council is authorized by section 69 of the Militia Act to place the militia on active service beyond Canada for the defence thereof, and by section 4 of the same Act, the Army Act, the King's Regulations and other relevant laws not inconsistent with Canadian enactments have force and effect for the governance of the militia as if enacted by the Parliament of Canada. But the Army Act, in section 177, provides that where a force of militia is raised in a colony, any law of the colony may extend to those belonging to that force, whether within or without the boundaries of the colony. This settled the question of extra-territorial jurisdiction. Another important development was the establishment in London in October, 1916, of a Canadian Ministry of Overseas Military Forces with a resident Minister. In course of time this became an Overseas Canadian War Office, with an adequate staff and a systematic arrangement of branches, administering the Canadian forces as a thoroughly autonomous body, under the primary direction of the Overseas Ministry, but finally responsible to the Canadian Parliament.

Immigration.—Though provinces may legislate in the matter of immigration, their legislation falls to the ground if it is inconsistent with the legislation or with the international obligations of the Dominion. Several Acts of the province of British Columbia restricting immigration have been disallowed on this account.

Under the Dominion law, Chinese immigrants are subjected to a head tax of $500, while Japanese immigrants are handled under a "gentlemen's agreement" with the Imperial Japanese Government, Japan undertaking to restrict the flow of Japanese to Canada. The restriction of immigration from other parts of the Empire, and more particularly from India, is, however, a very difficult question because of its reaction on the loyalty of the Indian peoples to the Empire. The question was discussed at the Colonial Conference of 1897 and at the Imperial Conference of 1911, when it was pointed out that the reasons for existing restrictions were purely economic and did not involve the question of the inferiority of those restricted. In 1917, the matter was discussed at the Imperial War Conference. The principle of reciprocity of treatment was accepted, and at the 1918 Conference it was agreed that "It is an inherent function of the Governments of the several communities of the British Commonwealth, including India, that each should enjoy complete control of the composition of its own population by means of restriction on immigration from any of the other communities." Provision was, however, made for permitting temporary visits. This arrangement has settled, at least for the time, a dispute which endangered the stability of the Empire.

Naturalization.—For a long period a very vexed question was the right of naturalization. Up to 1914, the Dominions were unable to grant full naturalization which would hold good throughout the Empire. In that year an Act of the British Parliament (4-5 Geo. V, c. 17), provided for the issue of a naturalization certificate to an alien by the Secretary of State on proof of five years' residence, and the fulfilment of certain other conditions. Where the Parliaments of the Dominions enforced the same conditions of residence, their Governments were given power to issue certificates of naturalization, taking effect in all parts of the Empire that had adopted the Act. This was done by Canada in 1914 (4-5 Geo. V, c. 44).

Copyright.—A difficult and anomalous situation with regard to copyright was similarly cleared up in 1911, the Imperial Copyright Act of that year being based on the principle that the Dominions must be free to legislate as they saw fit. The Act of 1911, therefore, does not extend to any Dominion unless the Parliaments of these Dominions have declared it to be in force; similarly, Dominion Parliaments may repeal it where it is in force.

Granting of Titles.—Another source of difficulty between the British Government and the Dominions has been the granting of titles by the former to citizens of the latter who have rendered services to the Empire as a whole. Opportunities of rendering such service came to many citizens of the Dominions during the war, and the British Government was generous in its recognition of these services. Exception was taken in the Canadian Parliament to the granting of titles to Canadians, and in 1919 Parliament passed an address to His Majesty praying that he should "refrain from conferring any title of honour or titular distinction upon any of his subjects domiciled or ordinarily resident in Canada, save such appellations as are of a professional or vocational character or which appertain to an office."

General Conclusion.—While it can hardly be maintained that the Dominions have as yet secured an adequate voice and influence in the direction of the Empire's foreign policy, it is to be observed that the powers of the Dominions have hitherto developed as the need for more extended powers has arisen. Without any violent break with the past, the Dominions have secured through the League

of Nations a voice in international affairs at least as powerful as that of such independent nations as Argentina and Brazil. Ten years ago this would have been considered unthinkable without a total separation from the Empire, yet it has actually occurred. This progress of the Dominions in international status in the past decade is thus set forth by Oppenheim, in the third edition of his International Law, Vol. 1, secs. 94a and 94b:

"94a. Formerly the position of self-governing Dominions, such as Canada, Newfoundland, Australia, New Zealand, and South Africa, did not, in International Law, present any difficulties. Then they had no international position whatever, because they were, from the point of view of International Law, mere colonial portions of the Mother Country. It did not matter that some of them, as, for example, Canada, and Australia, flew as their own flag the modified flag of the Mother Country, or that they had their own coinage, their own postage stamps, and the like. Nor did they become subjects of International Law (although the position was somewhat anomalous) when they were admitted, side by side with the Mother Country, as parties to the administrative unions, such as the Universal Postal Union. Even when they were empowered by the Mother Country to enter into certain treaty arrangements of minor importance with foreign States, they still did not thereby become subjects of International Law, but simply exercised for the matters in question the treaty-making power of the Mother Country which had been to that extent delegated to them."

"94b. But the position of self-governing Dominions underwent a fundamental change at the end of the World War. Canada, Australia, New Zealand, South Africa, and also India, were not only separately represented within the British Empire delegation at the Peace Conference, but also became, side by side with Great Britain, original members of the League of Nations. Separately represented in the Assembly of the League, they may, of course, vote there independently of Great Britain. Now the League of Nations is not a mere administrative union like the Universal Postal Union, but the organized Family of Nations. Without doubt, therefore, the admission of these four self-governing Dominions and of India to membership gives them a position in International Law. But the place of the self-governing Dominions within the Family of Nations at present defies exact definition, since they enjoy a special position corresponding to their special status within the British Empire as "free communities, independent as regards all their own affairs, and partners in those which concern the Empire at large." Moreover, just as, in attaining to that position, they have silently worked changes, far-reaching but incapable of precise definition, in the Constitution of the Empire, so that the written law inaccurately represents the actual situation, in a similar way they have taken a place within the Family of Nations, which is none the less real for being hard to reconcile with precedent. Furthermore, they will certainly consolidate the positions which they have won, both within the Empire and within the Family of Nations. An advance in one sphere will entail an advance in the other. For instance, they may well acquire a limited right of legation or limited treaty-making power. But from this time onward the relationship between Great Britain and the self-governing Dominions of the British Empire is not likely to correspond exactly to any relationship hitherto recognized in International Law unless the British Empire should turn into a Federal State."

A list of the Departments of the Dominion Government, of the Acts which they administer and of the principal publications of each Department will be found in the section "Statistics and other Information relating to Canada." See, in the index, the entries "Acts of Parliament administered by Departments of Dominion Government," and "Publications of the Dominion Government."

LIBRARY

IV.—PROVINCIAL AND LOCAL GOVERNMENT IN CANADA.

The source of the powers of the provincial governments of Canada is the British North America Act, 1867 (30-31 Vict., c. 3 and amendments). Under section 92 of the Act, the legislature of each province may exclusively make laws in relation to the following matters:—amendment of the constitution of the province, except as regards the Lieutenant-Governor; direct taxation within the province; borrowing of money on the credit of the province; establishment and tenure of provincial offices and appointment and payment of provincial officers; the management and sale of public lands belonging to the province and of the timber and wood thereon; the establishment, maintenance and management of public and reformatory prisons in and for the province; the establishment, maintenance and management of hospitals, asylums, charities and eleemosynary institutions in and for the province, other than marine hospitals; municipal institutions in the province; shop, saloon, tavern, auctioneer and other licenses issued for the raising of provincial or municipal revenue; local works and undertakings other than interprovincial or international lines of ships, railways, canals, telegraphs, etc., or works which, though wholly situated within one province, are declared by the Dominion parliament to be for the general advantage either of Canada or of two or more provinces; the incorporation of companies with provincial objects; the solemnization of marriage in the province; property and civil rights in the province; the administration of justice in the province, including the constitution, maintenance and organization of provincial courts both of civil and criminal jurisdiction, and including procedure in civil matters in these courts; the imposition of punishment by fine, penalty, or imprisonment for enforcing any law of the province relating to any of the aforesaid subjects; generally all matters of a merely local or private nature in the province.

Further, in and for each province the Legislature may, under section 93, exclusively make laws in relation to education, subject to the following provisions.—

"(1) Nothing in any such law shall prejudicially affect any right or privilege with respect to denominational schools which any class of persons have by law in the province at the union.

(2) All the powers, privileges and duties at the union by law conferred and imposed in Upper Canada on the separate schools and school trustees of the Queen's Roman Catholic subjects shall be and the same are hereby extended to the dissentient schools of the Queen's Protestant and Roman Catholic subjects in Quebec.

(3) Where in any province a system of separate or dissentient schools exists by law at the union or is thereafter established by the legislature of the province, an appeal shall lie to the Governor-General in Council from any act or decision of any provincial authority affecting any right or privilege of the Protestant or Roman Catholic minority of the Queen's subjects in relation to education.

(4) In case any such provincial law as from time to time seems to the Governor-General in Council requisite for the due execution of the provisions of this Section is not made, or in case any decision of the Governor-General in Council on any appeal under this Section is not duly executed by the proper provincial authority in that behalf, then and in every such case, and as far only as the circumstances of each case require, the Parliament of Canada may make remedial laws for the due execution of the provisions of this Section and of any decision of the Governor-General in Council under this Section."

The purpose of these sections was to preserve to a religious minority in any province the same privileges and rights in regard to education which it had at the date of Confederation, but the provincial legislatures were not debarred from legislating on the subject of separate schools provided they did not thereby prejudicially affect privileges enjoyed before Confederation by such schools in the province.

These powers, given to the four original provinces in Confederation, have, with some slight changes, been retained ever since and the more recently admitted provinces have assumed the same rights and responsibilities on their inclusion as units in the federation as were previously enjoyed by the older members.

I.—NOVA SCOTIA.[1]

The province of Nova Scotia has made no important changes in its constitution since it became one of the original members of Confederation in 1867. In that year the Legislative Council consisted of 36 members and the Legislative Assembly of 55 members. The number of members of the Council is now 21 and of the Assembly 43. Legislative councillors are appointed for life, and the members of the Assembly are elected for four years, the maximum duration of its existence. The constitutional relations of the Ministry to the Assembly are based on the principles of responsible government by which it retains office only so long as it is supported by a majority in the Legislative Assembly. The local Ministry or Cabinet, styled the Executive Council, consists of the Prime Minister and President of the Council, the Provincial Secretary, the Attorney-General, the Minister of Works and Mines and the Minister of Highways. These are salaried officials; six other members have office without salaries. Agriculture, immigration and education are under the control and management of the government through certain boards and councils, each with its secretary and staff of officials.

Municipal Institutions.—Previous to Confederation, the local government of counties and townships was confided to the magistracy, which was an appointed body, holding commissions for life and not responsible in any way to the electorate. In the early years of its history this body did much useful and important public service, yet abuses here and there existed on account of the irresponsible nature of their tenure of office, which rendered reform and public accountability very difficult to obtain. Public opinion, however, and the controlling influence of the legislatures operating steadily upon even irresponsible bodies of life-appointed magistrates made the institution as it existed fairly acceptable to the people generally. In 1875, the incorporation of the counties and certain townships, hitherto an optional action, was made compulsory, twenty-four municipalities being then established. In 1895, the Towns Incorporation Act was passed, making the incorporation of towns throughout the province optional. In 1921 there were 41 incorporated towns.

The county councils consist of councillors elected by the ratepayers every three years. The warden or presiding officer is chosen by the council and holds office until the next election of councillors. The mayors of towns are elected by the ratepayers and hold office for one year. Halifax, the capital of the province, has a special charter, the mayor being elected annually and the eighteen aldermen for three years, six retiring each year but being eligible for re-election.

[1] This article, as well as those on the government of the other Maritime Provinces, is adapted from the article by the late Thomas Barnard Flint, D.C.L., Clerk of the House of Commons, in the Canada Year Book, 1915.

Judiciary.—The provincial courts consist of (1) the supreme court, which is a court of appeal and also a circuit court, and (2) the county courts. Presiding over the supreme court are a chief justice and six other judges. One of these is a judge in equity, who also acts in divorce cases and one is admiralty judge of the exchequer court of Canada. The county courts have a limited original jurisdiction and an appeal jurisdiction from probate and magistrates' courts in certain cases. The judges of this court are seven in number, each having a district of jurisdiction covering a county or group of counties and holding terms of court in the county towns of their respective districts.

The judges of the supreme and county courts are appointed and paid by the Dominion Government, but the procedure of the courts in all civil matters is regulated by provincial legislation. The purely provincial courts and courts of probate have jurisdiction over wills and intestate estates. Stipendiary and police magistrates' courts and courts of justices of the peace are also under provincial jurisdiction. The judges of these courts and justices of the peace are appointed by the local government and are paid, in some cases by salaries and in others by fees. The sheriffs, clerks, registrars and officers of all the courts are appointed by the provincial authorities.

In criminal cases the jurisdiction and procedure of all the courts are fixed by federal statutes. The procedure as to the selection of grand and petit jurors, of revisers of voters' lists and assessment courts is fixed by the provincial statutes. In each county, and in some counties in one or more districts of a county, are offices for the registry of deeds and of all documents pertaining to transfers of or affecting titles to real estate as well as those creating and discharging liens on personal property.

II.—NEW BRUNSWICK.

The province of New Brunswick in all essential features of provincial administration is similar to its neighbour, Nova Scotia. The province entered Confederation with a Legislative Council of 40 members holding their seats for life, a Legislative Assembly of 40 members and an Executive Council of nine members. Under its powers of changing the provincial constitution, the Legislative Council was abolished by an act passed on April 16, 1891. The Assembly at present is composed of 47 members, and the Executive Council is composed of (1) the Premier, (2) the Minister of Lands and Mines, (3) the Minister of Public Works, (4) the Provincial Secretary-Treasurer, (5) the Minister of Agriculture, (6) the Minister of Public Health, and (7) the Attorney-General.

In New Brunswick the subject of public instruction is under the management of a Board of Education consisting of the Lieutenant-Governor of the province, the members of the Executive Council, the Chancellor of the University of New Brunswick and the Chief Superintendent of Education.

Municipal Institutions.—In the matter of municipal institutions and the establishment of responsible local government, New Brunswick has passed through several stages of development very similar to those of Nova Scotia, and the old *régime* of county government by magistrates, who were in no way responsible to the people, in time gave way to more modern forms. Municipal incorporation was rendered optional by an early Act of 1851, which, however, had but little effect beyond the division of counties into parishes with a certain amount of local auto-

nomy and some limited powers of administration which have been recognized in subsequent legislation. Later, however, an Act of 1877, providing for compulsory incorporation, was put into force, and, with its amendments, is substantially effective at the present time. It provides that county councils be constituted as bodies corporate, having two councillors elected yearly from each parish in the county. The councils elect from among their members a presiding officer who is styled the warden and who holds office until the next election of councillors. Councils may themselves, however, provide by by-law for their election biennially, a provision which does not apply to the municipality of the city and county of St. John which still holds a charter granted in the year 1785. In addition to a warden, each council elects a secretary, a treasurer and an auditor who may not be a councillor nor hold any office under the council. The councils also appoint overseers of the poor, constables, commissioners of highways, collectors of rates and other parish and county officials as may be necessary.

The qualifications of voters for the councils are very liberal. In general every British subject of legal age, having real property of any value if a resident, or if not, having real property to the value of one hundred dollars, is entitled to vote.

Judiciary.—The provincial courts of New Brunswick, similar to those of Nova Scotia, consist of the supreme court and of county courts, the supreme court consisting of the appeal division presided over by the chief justice of New Brunswick and two puisne judges, and the King's bench division, presided over by a chief justice and three puisne judges. There are six county court judges with jurisdiction in the fifteen counties of the province. Parishes are provided with local courts presided over by commissioners who are *ex officio* justices of the peace, and in some cases they are provided with stipendiary or police magistrates. These commissioners have civil jurisdiction in debts not exceeding eighty dollars and in cases of tort when the damages claimed to not exceed thirty-two dollars.

III.—PRINCE EDWARD ISLAND.

At the time of entering the Union, the government of Prince Edward Island consisted of a Governor and an Executive Council, a Legislative Council of 13 members, and a House of Assembly of 30 members. The Legislative Council was made elective in 1862 and so continued until its abolition after the union in 1873. The former Legislative Council districts, after the passage of the Abolition Act, elected members to the Legislative Assembly, fifteen in number, while the same districts elected members to the Assembly on a different franchise, thus practically amalgamating the two houses into one Assembly of 30 members. The electoral system, as far as voting is concerned, is practically one of manhood suffrage. The Executive Council of Prince Edward Island consists of (1) the President of the Council, and Attorney-General, (2) the Provincial Secretary-Treasurer, who is also Commissioner of Agriculture, (3) the Commissioner of Public Works, and (4) six members without portfolio.

With regard to the judiciary, the supreme court has a chief justice and two assistant judges. The judge of the county court for Queen's county is also the local judge in admiralty of the exchequer court. The supreme court is also a court of appeal and has jurisdiction in appeal chancery cases. It has original jurisdiction both in civil and criminal matters. In civil cases of debt the action must be for an amount above $32, and

all cases beyond the jurisdiction of the county court may be tried before a judge of the supreme court. The assistant judges of this court have also chancery powers. There is a surrogate and probate court for the province with one judge. A system of county courts is established consisting of three judges, one for each county. These are appointed and paid by the federal government and have jurisdiction in suits up to the sum of one hundred and fifty dollars. Education is under the direction of a Board of Education consisting of the members of the Executive Council of the province, the Superintendent of Education, who is also secretary of the Board, and the Principal of Prince of Wales College.

IV.—QUEBEC.[1]

Political and Administrative Organization.—The first assembly of representatives of the people to be elected by popular vote sat at Quebec, the capital of Lower Canada, in 1792, after the establishment of the parliamentary government which still exists and which originated in the Constitutional Act of 1791. A similar form of government was at the same time established in the province of Upper Canada. This state of affairs lasted down to 1840, when the two provinces were united, and the territory formed by the union of the two Canadas received the name of province of Canada. Finally, in 1867, a confederation of four provinces was set up. The provinces of Ontario, Quebec, New Brunswick and Nova Scotia were the first to join in establishing a central government, the seat of which was fixed by the Imperial Government at Ottawa.

The legislature of Quebec is composed of three branches: the Legislative Assembly of eighty-five members representing the eighty-six electoral divisions of the province (the counties of Charlevoix and Saguenay have the same representative); the Legislative Council of twenty-four members nominated for life by the Lieutenant-Governor in Council; and finally an Executive Council composed of the Lieutenant-Governor and his advisors, the ministers of the Crown.

The Legislative Assembly and also the Legislative Council have the power to bring forward bills relating to civil and administrative matters and to amend or repeal the laws which already exist. A bill, to be approved by the Lieutenant-Governor, must have received the assent of both Houses. Only the Legislative Assembly can bring forward a bill requiring the expenditure of public money. The extreme length of a Parliament is five years. The premier is assisted by seven ministers, each with departmental portfolios (one of them, the treasurer, having two portfolios) and by two ministers without portfolio.

Municipal Organization.—For the purposes of local or municipal administration, the province of Quebec is divided into county municipalities, 74 in number; these include rural municipalities and villages, as well as town municipalities hitherto organized under the former municipal code. In 1922 there were 22 city, 87 town and 261 village municipalities, as well as 943 rural municipalities, a total of 1,313 local municipalities. Each local municipality is administered by a corporation composed of seven members in the rural municipalities and of a number varying according to the municipality in the cities and towns. In rural municipalities, the election of candidates for the municipal council takes place annually in the month of January when three of the six councillors are replaced, while the mayor is elected

[1]Adapted from the article by G. E. Marquis, Chief of the Bureau of Statistics of Quebec, in the 1921 Year Book.

for a two year term. The county council is composed of all the mayors of the villages and rural municipalities in the county. The head of this body bears the name of warden and is elected at the March quarterly meetings of the council.

Most of the towns and cities are organized into separate corporations independent of any county council, in virtue of special charters granted by the legislature. The composition varies in different municipalities. The powers of the municipal councils are very extensive, being applicable, however, only to questions of purely local interest, while their regulations must contain no provisions incompatible with the municipal laws of the country. They can appoint officials to manage the business of the municipality; form committees to undertake particular branches of the administration; make all highway regulations; nominate a local board of health; see to the maintenance of order; and finally aid colonization and agriculture by imposing direct taxes upon the taxable property of municipalities.

All sums necessary for local public administration may be raised by the municipal council by means of direct taxation on the property in the municipality as well as on certain business stock.

Every two years assessors are named by the council who establish the value of the real property of their municipality. These assessors must make a new assessment roll every three years, but must amend and correct this roll every year. With this assessment as a basis, the municipal council raises the taxes which it needs to meet the expenses of administration. A few years ago a Department of Municipal Affairs was established to supervise more closely the carrying out of the municipal law and especially the borrowing of money.

School Organization.—Public instruction in the province of Quebec is governed by a single act called the Law of Public Instruction, although there are two kinds of schools, one for the Catholics and the other for the Protestants or non-Catholics. This is what is called the confessional system. Regulations for each of these religious units are prepared by the Catholic Committee or the Protestant Committee of the Council of Public Instruction, respectively, and submitted for the approval of the Lieutenant-Governor in Council before going into force. The territorial unit administered by a school corporation is called a school municipality. This may differ in boundaries from the parish and even from the local municipality. There are 1,746 of these school municipalities, of which 1,394 are Catholic and 352 Protestant. School municipalities are constituted at the request of a group of ratepayers by the Lieutenant-Governor in Council on the recommendation of the Superintendent of Public Instruction or occasionally by an Act of the legislature. Each of them must be divided into school districts, except in cities and towns. School administration is in the hands of five commissioners or three trustees. In the same municipality the dissentients or religious minority elect the *trustees* to direct the affairs of the dissentient schools while the majority elect the *commissioners*.

The school commissioners and trustees are elected for three years, five of the former or three of the latter forming a school corporation. Their duties are numerous, but in brief it may be said that they must erect a school in each school district, look after the maintenance, provide the necessary equipment, engage teachers, supervise their teaching and settle the differences which may arise between teachers and parents.

Like the municipal corporations, the school corporations have the right to impose taxes for the construction and maintenance of schools and for the payment of the teaching staff. School taxation is distributed over all the taxable property

of the school municipality; the assessment roll prepared by the Municipal Council must, except in rare cases, serve as a basis for the taxation imposed by the school corporations.

Formerly the school corporations had under their control schools of four kinds; kindergartens, elementary primary, intermediate primary and superior primary schools. A modification of the above classification was made in September, 1923, under which the last three types of schools were reduced to two which are the primary course (4 years) and the intermediate course (4 years). The programme of studies has been modified so as to give a more suitable type of education to country children, so as to keep them on the land, and to provide for town and city children an education which will fit them for industry, commerce and finance.

Besides the schools under control of the school corporation, there are also the classical colleges where secondary instruction is given, as well as four universities, not including several special schools. The whole school organization is directed by the Council of Public Instruction, which prepares the school regulations and the programme of studies. It chooses also the professors and principals of the Normal schools, as well as the examiners of candidates for teachers' certificates; finally, it approves as it sees fit, the textbooks which are submitted to it. When the two Committees of the Council sit together, thus constituting the Council, its chairman is the Superintendent of Public Instruction, who also directs the Department of Public Instruction. He is named for life by the Lieutenant-Governor in Council, but the Provincial Secretary is the spokesman of this department, and is responsible before the provincial legislature for its administration.

V.—ONTARIO.[1]

Historical.—The northern part of what is now the province of Ontario came under British rule in 1713, by the Treaty of Utrecht, the southern part in 1763, by the Treaty of Paris. At the latter date the whole white population was only about 1,000, mainly settled along the Detroit river. By Royal Proclamation of Oct. 7, 1763, the eastern part of the province, and by the Quebec Act of 1774 (14 Geo. III, c. 83), the whole of what is now southern Ontario, became part of the province of Quebec, under French civil and English criminal law and without any representative government. The immigration of the United Empire Loyalists and their settlement in the country led to an increasing demand both for English civil law and for representative institutions. This demand was met by the passing of the Constitutional Act of 1791 (31 Geo. III, c. 31), which established the province of Upper Canada with a Lieutenant-Governor, a Legislative Council of not fewer than seven, and a Legislative Assembly of not fewer than sixteen members, to be elected by the people. These representatives of the people, however, had little control over the Executive Council, and the result was the struggle for responsible government which culminated in the rebellion of 1837, after which Lord Durham's report paved the way for its introduction and the union of the Canadas by the Act of Union (3-4 Vict., c. 35).

Present Constitution.—The Legislative Assembly of Ontario, the single chamber of the legislature of the province, was originally composed of 82 elected members, the number, however, having been increased until the present when

[1]Adapted from the article by S. A. Cudmore, Editor Canada Year Book, in the 1921 Year Book.

its total is 111. It is elected for four years on an adult suffrage basis and holds annual sessions so that 12 months shall not intervene between the last sitting in one session and the first sitting in the next.

The Executive Council consists (1923) of thirteen members, nine of them holding portfolios as follows: Prime Minister and Minister of Education; Attorney-General; Secretary and Registrar; Treasurer; Lands and Forests; Agriculture; Public Works and Highways; Labour; Mines.

Besides the regular departments, certain commissions have been created for specific purposes. They include the Niagara Falls Park Commission, the Railway and Municipal Board, the Hydro-Electric Power Commission and the Timiskaming and Northern Ontario Railway Commission.

Municipal Government.—Under the system established by the Constitutional Act of 1791, municipal administration was carried on in the main by the courts of quarter sessions, whose members were appointed by and responsible to the governor in council. As urban communities began to grow, there commenced an agitation for local self-government, which after many rebuffs, resulted in 1832 in the grant to Brockville of a limited measure of control of the local police. In 1833 Hamilton and in 1834 Belleville, Cornwall, Port Hope and Prescott received similar powers, while in the latter year York became a self-governing city with a mayor, aldermen and councillors under the name of Toronto, Kingston receiving in 1838 a similar constitution, though being denied the name of city.

Upon the introduction of responsible government, the District Councils Act of 1841 was passed, giving a considerable measure of local self-government with a large measure of control by the central authorities and a few years later, a more comprehensive measure, the Municipal Act of 1849 came into force.

This Act has been called the Magna Charta of municipal institutions, not only for Ontario, but for the newer provinces which largely copied Ontario institutions. Its main features are still clearly visible in the municipal system of to-day.

Under this system there existed in 1868, when the first legislature of Ontario assembled, 539 local self-governing units, including 36 counties, 399 townships, and 104 cities, towns and villages. In 1921, there were in the province 911 local self-governing units, including 38 county municipalities, 557 townships, 149 villages, 143 towns and 24 cities. There was thus in that year a local self-governing body for every 3,200 of the population of the province, and the general effect has been to initiate the masses of the people in the problems of self-government, so that Ontario has been described by eminent students of democratic governments as one of the most perfect democracies in existence.

Townships and Villages.—Township municipalities may be organized in hitherto unorganized territory when the population of the geographical township of six miles square is not less than 100, and where the inhabitants of an area not surveyed into townships exceed 100 on not more than 20,000 acres. The township is governed by a chief executive officer styled reeve, and four others who may be deputy reeves or councillors, depending on the number of municipal electors. These provisions apply also to villages, which may be created out of districts or parts of townships where a population of 750 exists on an area not exceeding 500 acres. Police villages with certain limited rights of self-government may be formed by county councils where a population of not less than 150 exists upon an area of not less than 500 acres and where the majority of freeholders and resident tenants of the locality petition therefor. Police villages are administered by three trustees who may be created a body corporate where the population exceeds 500.

Towns.—Towns may be incorporated on conditions prescribed by the Ontario Railway and Municipal Board, but must have not less than 2,000 population. A town in unorganized territory is governed by a mayor and six councillors, or if the population is not less than 5,000, by a mayor and nine councillors. A town not in unorganized territory is governed by a mayor, a reeve, as many deputy reeves as the town is entitled to have as its representatives in the county council, and three councillors for each ward where there are less than five wards, or two councillors for each ward where there are five or more wards. Towns having not less than 5,000 population may, by by-law approved by the electors, withdraw from the jurisdiction of the county council.

Cities.—Cities, which are always entirely separate in government from their counties, must have, when constituted, a population of 15,000. They are governed by a mayor, a Board of Control if such exists, and, at the option of the council, two or three aldermen for each ward. Boards of Control, who may be elected by general vote in any city of more than 45,000 people and must be so elected in cities of over 100,000, form a sort of executive authority for the larger cities giving a large portion of their time to the public service, and being paid a salary considerably higher than the alderman's indemnity. The duties of the Board of Control include the preparation of estimates, the awarding of contracts, the inspection of municipal works, and the nomination of officers and their dismissal or suspension. The Board reports to the council, in which its members also have a vote, and its action is subject to approval or reversal by the whole council. The council may not make appropriations or expenditures of sums not provided for by the Board's estimates, without a two-thirds vote of the members present.

Counties.—All members of county councils are also members of the councils of the municipalities within the larger county municipality, being the reeves and deputy reeves of townships, villages and towns. The presiding officer of the county council is called the warden, and is annually chosen from among the reeves who are members of the council. The county council has charge of the main highways and bridges, the courthouse, gaol, house of refuge, registry office, etc. Its rates are collected through the constituent local municipalities. Provisions for the erection of one kind of urban municipality into another are given in the Municipal Act.

Judiciary.—Under the Law Reform Act of 1909 (9 Edw. VII, c. 28), the Supreme Court of Ontario is established in two divisions, the appellate division and the high court division, the former being a continuation of the old court of appeal and the latter a continuation of the old high court of justice. The appellate division is composed of not less than two divisional courts, each with five justices, who try appeals from the high court and the other courts of the province, and from whose decision appeals may in certain cases be made to the Supreme Court of Canada. The justices of the High Court hold assizes at least twice a year in each county, with a very comprehensive jurisdiction. In each county or district there is a court presided over by a judge, who sits at least twice a year, with or without a jury, to try minor civil actions. Each county judge also presides at least twice yearly over a court of general session, with a limited jurisdiction in criminal matters. Criminals may, with their own consent, be tried by the county judge without a jury. Each judicial district is divided into court divisions in each of which a division court is held by the county judge, or his deputy, at least once in every two months. These courts are for the recovery of small debts and damages. The county judges hold revision courts for the revision of assessment rolls and of voters' lists; they are also judges of the surrogate courts, which deal with the estates of deceased persons.

VI.—MANITOBA, SASKATCHEWAN AND ALBERTA.[1]

Historical.—On the prairies there have been two distinct trends of historical and political development—that of the Red River and that of the Territories. The whole region was originally under the sway of the Honourable Company of Adventurers trading into Hudson's Bay. In the case of Red River, responsible self-rule came with the transfer to Canada. The Territories possessed absolutely no form of government prior to their incorporation in the Dominion.

On September 4, 1812, Captain Miles Macdonell, in the name of Lord Selkirk, took formal possession of the District of Assiniboia at the forks of the Red and Assiniboine rivers. This was the first act of government in what is now western Canada.

The district was governed for several years by a governor and council appointed by Selkirk, and although it was responsible to only a slight degree to those whose interests it was expected to regard and foster, its membership was largely representative of the leaders in the community. In 1841, the Municipal District of Assiniboia was formed, its establishment marking the beginnings of self-government in the west.

The series of Dominion Acts relating to the west begins with "An Act for the temporary government of Rupert's Land and the Northwestern Territory when united with Canada," June 22, 1869. This Act sought to prepare for the transfer of the Territories from the local authorities to the government of Canada. A year later the Manitoba Act (33 Vict., c. 3) launched upon its independent constitutional career the old district of Assiniboia, now in possession of complete self-government. For a short time there was a temporary government with two ministers and the Legislative Assembly. After this, government was carried on with the Legislative Assembly and a Legislative Council, but without a premier. At the end of six years the Legislative Council was abolished. Without a Legislative Council but with a premier and a Legislative Assembly, the province assumed the constitutional form which has endured to the present day.

On the establishment of the province of Manitoba, the Territories were not at first given a separate government. They were administered from Fort Garry by the Lieutenant-Governor of Manitoba with the aid, first of a small executive council of three, and then with the aid of a more formal but still provisional Northwest Council. The charter of the separate political existence of the Territories is the Northwest Territories Act, 1875 (38 Vict., c. 49). The development of the country had already become a rapid one. The construction of the Canadian Pacific railway exerted a powerful influence on its growth and tended to a great extent to determine the course of settlement. While the capital was still at Battleford, in 1881, Chief Factor Lawrence Clarke was elected to represent the district of Lorne on the Northwest Council. Three years later the elected representatives of the people became numerous enough to exert an influence upon legislation. In 1886 a territorial judiciary was established. Then followed a parliamentary struggle for the control of the purse. In quick succession came the Advisory Council, the Executive Committee, the Executive Council. In the contest between representatives of the settlers and the Dominion officials, victory lay with the people and with the cause of popular government. It was not, however, till 1897, on the eve of a remarkable growth in population and economic development, that the government of the Territories, which for half a decade had been giving expression to the

[1]Adapted from the article by Rev. E. H. Oliver, Ph. D., F.R.S.C., in the 1921 Year Book.

people's will, was made completely responsible in form as it had already been in fact.

The increased volume of immigration necessitated heavier expenditures upon education, public works and local administration. It was impossible to introduce municipal organizations into many districts outside the limits of the denser settlements. The result was to impose excessive burdens upon the territorial government. Financial embarrassments gave rise to constitutional aspirations. Finally, after a prolonged agitation, the Saskatchewan and Alberta Acts (4-5 Edw. VII, cc. 42 and 43), provided for the erection on September 1st, 1905, of two provinces, Saskatchewan and Alberta.

Provincial Constitutions.—Each of the three provinces has a Lieutenant-Governor, appointed by the Dominion Government, who holds office for five years. Within his term he is not removable except for cause assigned, communicated to him in writing. His powers are exercised in accordance with the principles of responsible government, with the advice and consent of the provincial cabinet. Each province also, has in its cabinet a Minister of Public Works, an Attorney-General, a Minister of Agriculture, a Provincial Treasurer, a Minister of Education and a Provincial Secretary. More than one department or sub-department is frequently under one responsible minister. In addition each province has a Legislature consisting of the Lieutenant-Governor and the Legislative Assembly. There must be a yearly session. Though the Assembly may be dissolved at any time it must not continue longer than a fixed period of years after a general election.

1.—Manitoba.

Municipal Government.—The stages in the growth of municipal institutions in Manitoba are marked by the legislation of the years 1871, 1873, 1882 and 1900. In 1871, the County Assessment Act and the Parish Assessment Act made provision for dealing with local finance. An Act of 1873 provided for the erection of a local municipality in districts containing not less than 30 freeholders. In 1883, the province was divided into 26 counties and 3 judicial districts. Then, by the General Municipal Act of 1900, every city, town, village and rural municipality became a body corporate. Over all of these bodies, excepting cities having separate charters of incorporation, is the supervision of a department of Municipal Affairs. By legislation enacted in 1921, a Tax Commission was established in order to improve the standard of municipal assessment throughout the province, and especially in rural areas where some laxity had existed.

A feature peculiar to local government in Manitoba is the "Improvement District," that portion of a rural municipality or incorporated village formed into a particular territory to provide for local improvements. It differs in both nature and functions from the improvement districts of Saskatchewan and Alberta. In general, the other forms of municipal organization are the rural municipalities villages, towns and cities.

School Districts.—The most elementary and in many ways the most important unit of self-government on the prairies is the school district, the local organization for the support and administration of educational affairs. Its individual character depends largely on whether it is a rural, village, town, city or consolidated district, but the most common of these, the rural district, is governed by a board of three trustees elected by the ratepayers for three years, one being elected and one retiring annually. Still another form also exists, the rural municipality school organization, an aggregation of rural schools under one board of trustees.

Other Forms.—As mentioned above, the other forms of municipal organization in addition to the improvement district are the rural municipalities, villages, towns and cities. The rural municipality is a permanent corporate body with powers to legislate on matters such as public health, cemeteries, hospitals, cruelty to animals, fires, municipal buildings, etc. It collects the school taxes in the district and may borrow by means of debenture issues. Certain license fees may be collected but taxation constitutes the principal source of revenue. The council consists of the reeve and six or four councillors as determined by by-law.

Villages are incorporated under the Municipality Act in which a primary requirement is that a minimum number of 500 inhabitants be resident on an area of 640 acres.

Towns may be erected on a petition from any locality with over 1,500 inhabitants. The council consists of the mayor and two councillors from each ward.

A city in Manitoba may be formed on application from a town containing over 10,000 inhabitants. Its council is composed of a mayor, a board of control similar to those of Ontario, and two aldermen from each ward. Its powers are the familiar ones including the acquisition of property, public safety, public order and morality, fire protection, libraries, drainage, sewerage and water supply.

Judiciary.—The courts of the three provinces are essentially the same. In Manitoba there are the court of appeal, with a chief justice and four puisne judges, the court of King's bench, the surrogate court and the county courts. In Saskatchewan are the court of appeal and the court of King's bench (with the supreme court judges having jurisdiction in bankruptcy) and several district courts. In Alberta there are the trial and appellate divisions of the supreme court (the judges acting in bankruptcy as above) and also several judicial districts and sub-judicial districts presided over by district judges.

2.—Saskatchewan.

The province of Saskatchewan began its existence in 1905 with numerous municipal customs and organizations which it received as a legacy from the old Northwest Territories. Many of them were soon discarded on the recommendation of investigating commissions and among the earliest moves of the new province in the direction of municipal government was the amending of local improvement Acts and the consolidating of other Acts relating to municipalities.

In general, local government in Saskatchewan is similar to that of Manitoba. The school district is the most important governmental unit. Improvement districts in both Saskatchewan and Alberta differ from those in Manitoba in that they consist of those sparsely settled areas where there exists either no municipal organization whatever or one of a very simple character. As a rule each local improvement district has exactly the same area as the rural municipality into which it may subsequently be transformed. This is generally the territorial unit of 18 miles square or 9 townships. Taxes are collectible by the Department of Municipal Affairs and are expended within the district on highways, the destruction of animal and insect pests, etc.

Villages may be incorporated when 50 people actually resident in a hamlet make application. Taxes may be levied on land at its fair actual value, on buildings and improvements at 60 p.c. of their value and on personal property and income. On written petition of two-thirds of the number of ratepayers, a by-law providing for the assessment of land only may be passed.

Towns may be erected from villages having over 500 inhabitants. The land and improvements are assessed on the same basis as in villages, but in addition, the town has the power of imposing an income tax, a tax on personal property and a tax on improvements.

Towns of 5,000 inhabitants may be incorporated as cities under a general City Act. The city may, at its own volition, assess land values, exempting buildings and improvements. City government is by mayor and aldermen elected by the people and by appointed commissioners, a contrast to the elective boards of control common to eastern cities.

3.—Alberta.

From the standpoint of government, the development of Alberta since its creation in 1905 has been very similar to that of Saskatchewan, in much the same way as these two provinces have been closely allied with Manitoba in the application of older, eastern methods of government to western conditions.

In Alberta also, the five main forms of municipal organization exist: improvement and municipal districts, villages, towns and cities. The school district is again a vital element in the organization of government and, in Alberta, is similar in constitution to those of the other prairie provinces. The council of rural municipalities is generally elected at large, although, with the electors' approval, it may provide for election by divisions in a manner similar to that seen in Saskatchewan where the reeve is elected at large while each of the six councillors is chosen by a division of a township and a half. A village in Alberta is not a corporate body and its powers are very limited. It may be established where any centre of population contains 25 occupied dwelling houses within an area of 640 acres. When a village population reaches 700 it may be established as a town and towns again may become cities on application and granting of a special charter. As each city conducts its affairs according to the provisions of its charter (since there is no City Act governing their creation) methods of city government in the province show considerable differences.

VII.—BRITISH COLUMBIA[1].

British Columbia entered Confederation on July 20, 1871. The province had been constituted in 1866 by the union of the colony of Vancouver Island and its dependencies with that of British Columbia. Local responsible government began before Confederation, but previously the colonies had been administered by two mixed elective and appointed councils. The Lieutenant-Governor and a Cabinet not to exceed twelve ministers constitute the present administration. The Cabinet is composed of the following: the Premier, who is also Minister of Railways and President of the Council; Attorney-General and Minister of Labour; Minister of Finance and Minister of Industries; Provincial Secretary and Minister of Education; Minister of Lands; Minister of Mines and Commissioner of Fisheries; Minister of Public Works; Minister of Agriculture.

British Columbia has a single chamber legislature, consisting of 47 members. Vancouver's representation has been increased from 2 members in 1894 to 6 at present, elected at large. Victoria returns 4 members, while the other 36 ridings are one-member constituencies. The term of the Legislative Assembly, formerly four years, was increased to five years in 1913.

[1]Adapted from the article by John Hosie in the 1921 Year Book.

Judiciary.—The principal courts of the province in the order of authority are as follows:—

1. Court of Appeal, consisting of a chief justice and four puisne judges. The appellate jurisdiction of this court is wide, covering appeals from all judgments and orders of the supreme court, appeals from the county courts, appeals from the opinion of a judge of the supreme court on constitutional questions referred to him by the Lieutenant-Governor in Council, etc. It is also the court of appeal for the province in all criminal cases under the Criminal Code of Canada.

2. The Supreme Court, consisting of a chief justice and five puisne judges. It has general jurisdiction throughout the province as a superior court of record, and there are certain appeals under provincial legislation which are heard before it. Its jurisdiction is exercisable by each individual judge as and for the court.

3. County Courts, of which there are nine. These have jurisdiction in all personal actions where the amount involved does not exceed $1,000; in actions of ejectment where the value of the premises does not exceed $2,500; in equity cases where the amount involved does not exceed $2,500. They have wide jurisdiction under the provincial mining acts, and upon appeals from small debts courts. The administration of criminal justice is also largely in their hands.

4. Small Debts Courts, with jurisdiction in personal actions up to $100. They are presided over by judges appointed by the provincial government.

In addition to the above courts there are many stipendiary magistrates and justices of the peace, exercising a more or less limited jurisdiction under the Criminal Code of Canada as well as under the Summary Convictions Act.

Education.—The Department of Education is under a Minister who is also Provincial Secretary. The Superintendent of Education has the rank of a deputy minister. Supervision is in the hands of two high school inspectors, sixteen inspectors of schools, and one inspector of manual training schools. The system is non-sectarian. Attendance is compulsory from the age of 7 to 14. The provincial university was authorized by legislation in 1908, but was not opened until 1915. It confers degrees in Arts, Applied Science and Agriculture, and has power to grant degrees in all branches except theology.

Other educational institutions include two normal schools and over forty high schools. There are also night schools for instruction in academic and technical subjects. Manual training and household science departments are in operation in many high schools and elementary schools.

The maintenance of all city and town schools, and a large majority of the rural schools, is provided for by local or district assessment, supplemented by grants from the provincial treasury. Control of these schools is vested in the local authorities, subject to the regulations of the department. Cities and organized municipalities elect their boards by popular vote. These boards appoint municipal inspectors and other officers.

Municipal Government.—Local administration is at present based on the Municipal Act and amending statutes, together with the Village Municipalities Act. Large powers of local self-government are conferred by the existing system. An urban municipality may be formed by a community of not less than 100 male British subjects, provided the owners of more than half of the land petition for it. District municipalities may be organized by 30 resident male British subjects of full age. Village municipalities may be formed by petition where the number of residents does not exceed 1,000 but the provisions of the Municipal Act shall not

apply thereto. The city organizations are of the same general type, differing only in details. In all, the chief executive officer is the mayor, and all have elective councils.

The Municipal Act has provision for the board of control, but neither this nor the Commission system is in operation. All the larger cities have dropped the ward system. Vancouver, the largest city, has reduced its council to eight members. The municipal franchise for ordinary purposes is open to adult male residents and to female householders and real estate owners. Only owners of real estate, male or female, may vote on money by-laws. Such by-laws are necessary for expenditures beyond the ordinary revenue, requiring the issue of debentures. They require a three-fifths majority of the votes cast. The chief executive of a district municipality is the reeve and in most other respects the district municipality is similar to the city government.

While the general municipal system is established by common legislation, several municipalities have secured certain modifications by special enactment. Each has its own system of assessment and taxation. Vancouver, for example, levies taxes upon fifty per cent of the value of improvements.

Under the Municipal Cemeteries Act, 1921, municipalities are given power to establish cemeteries, mausoleums and crematoriums. Two or more municipalities may act together in the matter, with a joint board of control appointed by the respective councils.

Aid is now given the municipalities from the receipts from government sale of liquor, from receipts for motor licenses, and from a newly imposed tax on betting at race meetings. The apportionment of such moneys is on a basis of population.

V.—PARLIAMENTARY REPRESENTATION IN CANADA.

I.—DOMINION PARLIAMENT.

The Dominion Parliament is composed of the King, represented by the Governor-General, the Senate and the House of Commons. The Governor-General is appointed by the King in Council. Members of the Senate are appointed for life by the Governor-General in Council and members of the House of Commons are elected by the people. As a result of the working out of the democratic principle, the part played by the King's representative and the Upper Chamber of Parliament in the country's legislation has been, in Canada as in the mother country, a steadily decreasing one, the chief responsibilities involved in legislation being assumed by the House of Commons.

The Governor-General of Canada—The Governor-General is appointed by the King as his representative in Canada, usually for a term of five years, with a salary fixed at £10,000 sterling per annum and forming a charge against the consolidated revenue of the country. The Governor-General is bound by the terms of his commission and can only exercise such authority as is expressly entrusted to him. He acts under the advice of his Ministry, which is responsible to Parliament, and, as the acting head of the executive, summons, prorogues and dissolves Parliament and assents to or reserves bills. In the discharge of these and other executive duties, he acts entirely by and with the advice of his Ministry (the Governor-General in Council). In matters of Imperial interest affecting Canada, he consults with his Ministers and submits their views to the British government. The royal prerogative of mercy in capital cases, formerly exercised on the Governor-General's own judgment and responsibility, is now exercised pursuant to the advice of the Ministry.

A list of the Governors-General from the time of Confederation, with the dates of their appointment and assumption of office, is given in Table 1.

1.—Governors-General of Canada, 1867-1923.

Name.	Date of appointment.	Date of assumption of office.
Viscount Monck, G.C.M.G.	June 1, 1867	July 1, 1867
Lord Lisgar, G.C.M.G.	Dec. 29, 1868	Feb. 2, 1869
The Earl of Dufferin, K.P., K.C.B., G.C.M.G.	May 22, 1872	June 25, 1872
The Marquis of Lorne, K.T., G.C.M.G.	Oct. 5, 1878	Nov. 25, 1878
The Marquis of Lansdowne, G.C.M.G.	Aug. 18, 1883	Oct. 23, 1883
Lord Stanley of Preston, G.C.B.	May 1, 1888	June 11, 1888
The Earl of Aberdeen, K.T., G.C.M.G.	May 22, 1893	Sept. 18, 1893
The Earl of Minto, G.C.M.G.	July 30, 1898	Nov. 12, 1898
The Earl Grey, G.C.M.G.	Sept. 26, 1904	Dec. 10, 1904
Field-Marshal H.R.H. the Duke of Connaught, K.G.	Mar. 21, 1911	Oct. 13, 1911
The Duke of Devonshire, K.G., G.C.M.G., G.C.V.O.	Aug. 19, 1916	Nov. 11, 1916
General the Lord Bing of Vimy, G.C.B., G.C.M.G., M.V.O.	Aug. 2, 1921	Aug. 11, 1921

The Ministry—A system of government based upon the British, by which a Cabinet or Ministry (composed of members of the House of Commons or the Senate), responsible to Parliament, holds office while it enjoys the confidence of

the people's representatives, is found in Canada. The Cabinet is actually a committee of the King's Privy Council for Canada. Without enlarging upon the features of the system, it may be sufficient to note that the Cabinet is responsible to the House of Commons, and, following established precedent, resigns office when it becomes evident that it no longer holds the confidence of the people's representatives. Members of the Cabinet are chosen by the Prime Minister; each of them generally assumes charge of one of the various departments of the government, although one Minister may hold two portfolios at the same time, while other members may be without portfolio. The present Ministry consists of 19 members. Three of them are without portfolio while four others, including the Prime Minister, are in charge of two or more departments.

The Prime Ministers since Confederation and their dates of office, together with the members of the present Ministry, are given in Table 2.

2.—Ministries since Confederation.

1. Rt. Hon. Sir John A. Macdonald, Premier. From July 1, 1867 to Nov. 6, 1873.
2. Hon. Alexander Mackenzie, Premier. From Nov. 7, 1873 to Oct. 16, 1878.
3. Rt. Hon. Sir John A. Macdonald, Premier. From Oct. 17, 1878 to June 6, 1891.
4. Hon. Sir John J. C. Abbott, Premier. From June 16, 1891 to Dec. 5, 1892.
5. Hon. Sir John S. D. Thompson, Premier. From Dec. 5, 1892 to Dec. 12, 1894.
6. Hon. Sir Mackenzie Bowell, Premier. From Dec. 21, 1894 to April 27, 1896.
7. Hon. Sir Charles Tupper, Premier. From May 1, 1896 to July 8, 1896.
8. Rt. Hon. Sir Wilfrid Laurier, Premier. From July 11, 1896 to Oct. 6, 1911.
9. Rt. Hon. Sir Robert L. Borden, Premier. (Conservative Administration). From Oct. 10, 1911 to Oct. 12, 1917.
10. Rt. Hon. Sir Robert L. Borden, Premier. (Unionist Administration). From Oct. 12, 1917 to July 10, 1920.
11. Rt. Hon. Arthur Meighen, Premier. (Unionist—"National Liberal and Conservative Party"). From July 10, 1920 to Dec. 29, 1921.
12. Rt. Hon. William Lyon Mackenzie King, Premier. From Dec. 29, 1921.

NOTE.—A complete list of the members of Dominion Ministries from Confederation to 1913 appeared in the Year Book of 1912, pp. 422–429. A list of the members of the Dominion Ministries from 1911 to 1921 appeared in the Year Book of 1920, pp. 651–653.

TWELFTH DOMINION MINISTRY.

(According to precedence of the Ministers as at the formation of the Cabinet.)

Office.	Occupant.	Date of Appointment.
Prime Minister, Secretary of State for External Affairs, President of the Privy Council	Right Hon. William Lyon Mackenzie King	Dec. 29, 1921
Minister of Finance	Right Hon. William S. Fielding	Dec. 29, 1921
Minister of National Defence	Hon. George P. Graham	Dec. 29, 1921
	Hon. Edward Macdonald[1]	April 28, 1923
	Hon. Edward Macdonald	Aug. 17, 1923
Postmaster General	Hon. Charles Murphy	Dec. 29, 1921
Minister without Portfolio	Hon. Raoul Dandurand	Dec. 29, 1921
Minister of Soldiers' Civil Re-Establishment and the Minister in charge of and to administer the Department of Health	Hon. Henri S. Béland	Dec. 29, 1921
Minister of Public Works	Hon. Hewitt Bostock	Dec. 29, 1921
	Hon. James H. King	Feb. 3, 1922
Minister of Justice and Attorney General	Hon. Sir Lomer Gouin	Dec. 29, 1921
Minister of Customs and Excise	Hon. Jacques Bureau	Dec. 29, 1921
Minister of Marine and Fisheries	Hon. Ernest Lapointe	Dec. 29, 1921
Solicitor General	Hon. Daniel D. McKenzie	Dec. 29, 1921
	Hon. E. J. McMurray	Sept. 12, 1923

[1]Acting Minister.

TWELFTH DOMINION MINISTRY—concluded.

Office.	Occupant.	Date of Appointment.
Minister of Immigration and Colonization	Hon. James A. Robb	Aug. 17, 1923
Minister of Trade and Commerce	Hon. James A. Robb	Dec. 29, 1921
	Hon. Thomas A. Low	Aug. 17, 1923
Minister without Portfolio	Hon. Thomas A. Low	Dec. 29, 1921
Secretary of State	Hon. Arthur B. Copp	Dec. 29, 1921
Minister of Railways and Canals	Hon. William C. Kennedy	Dec. 29, 1921
	Hon. George P. Graham	April 28, 1923
Minister of the Interior, Superintendent General of Indian Affairs and Minister of Mines	Hon. Charles Stewart	Dec. 29, 1921
Minister of Agriculture	Hon. William R. Motherwell	Dec. 29, 1921
Minister of Labour	Hon. James Murdock	Dec. 29, 1921
Minister without Portfolio	Hon. John. E. Sinclair	Dec. 29, 1921

In Table 3 are given the dates of the opening and prorogation of the sessions of the various Dominion Parliaments from 1867 to 1923.

3.—Duration and Sessions of Dominion Parliaments, 1867-1923.

Number of Parliament.	Session.	Date of Opening.	Date of Prorogation.	Days of session.	Elections, writs returnable, dissolutions, and lengths of Parliaments.[10]
1st Parliament	1st	Nov. 1, 1867	May 22, 1868	118[1]	
	2nd	April 15, 1869	June 22, 1869	69	Aug., Sept., 1867.[3]
	3rd	Feb. 15, 1870	May 12, 1870	87	Sept. 24, 1867.[4]
	4th	Feb. 15, 1871	April 14, 1871	59	July 8, 1872.[5]
	5th	April 11, 1872	June 14, 1872	65	4 y., 9 m., 15 d.[6]
2nd Parliament	1st	Mar. 5, 1873	Aug. 13, 1873	81[2]	July, Aug., Sept., '72.[3] Sept. 3, 1872.[4]
	2nd	Oct. 23, 1873	Nov. 7, 1873	16	Jan. 2, 1874.[5]
					1 y., 4 m., 0 d.[6]
3rd Parliament	1st	Mar. 26, 1874	May 26, 1874	62	Jan. 22, 1874.[3]
	2nd	Feb. 4, 1875	April 8, 1875	64	Feb. 21, 1874.[4]
	3rd	Feb. 10, 1876	April 12, 1876	63	Aug. 17, 1878.[5]
	4th	Feb. 8, 1877	April 28, 1877	80	4 y., 5 m., 25 d.[6]
	5th	Feb. 7, 1878	May 10, 1878	93	
4th Parliament	1st	Feb. 13, 1879	May 15, 1879	92	Sept. 17, 1878.[3]
	2nd	Feb. 12, 1880	May 7, 1880	86	Nov. 21, 1878.[4]
	3rd	Dec. 9, 1880	Mar. 21, 1881	103	May 18, 1882.[5]
	4th	Feb. 9, 1882	May 17, 1882	98	3 y., 5 m., 28 d.[6]
5th Parliament	1st	Feb. 8, 1883	May 25, 1883	107	June 20, 1882.[3]
	2nd	Jan. 17, 1884	April 19, 1884	94	Aug. 7, 1882.[4]
	3rd	Jan. 29, 1885	July 20, 1885	173	Jan. 15, 1887.[5]
	4th	Feb. 25, 1886	June 2, 1886	98	4 y., 5 m., 10 d.[6]
6th Parliament	1st	April 13, 1887	June 23, 1887	72	Feb. 22, 1887.[3]
	2nd	Feb. 23, 1888	May 22, 1888	90	April 7, 1887.[4]
	3rd	Jan. 31, 1889	May 2, 1889	92	Feb. 3, 1891.[5]
	4th	Jan. 15, 1890	May 16, 1890	121	3 y., 9 m., 27 d.[6]
7th Parliament	1st	April 29, 1891	Sept. 30, 1891	155	
	2nd	Feb. 25, 1892	July 9, 1892	136	March 5, 1891.[3]
	3rd	Jan. 26, 1893	April 1, 1893	66	April 25, 1891.[4]
	4th	Mar. 15, 1894	July 23, 1894	131	April 24, 1896.[5]
	5th	April 18, 1895	July 22, 1895	96	5 y., 0 m., 0 d.[6]
	6th	Jan. 2, 1896	April 23, 1896	111	
8th Parliament	1st	Aug. 19, 1896	Oct. 5, 1896	48	
	2nd	Mar. 25, 1897	June 29, 1897	97	June 23, 1896.[3]
	3rd	Feb. 3, 1898	June 13, 1898	131	July 13, 1896.[4]
	4th	Mar. 16, 1899	Aug. 11, 1899	149	Oct. 9, 1900.[5]
	5th	Feb. 1, 1900	July 18, 1900	168	4 y., 2 m., 26 d.[6]
9th Parliament	1st	Feb. 6, 1901	May 23, 1901	107	Nov. 7, 1900.[3]
	2nd	Feb. 13, 1902	May 15, 1902	90	Dec. 5, 1900.[4]
	3rd	Mar. 12, 1903	Oct. 24, 1903	227	Sept. 29, 1904.[5]
	4th	Mar. 10, 1904	Aug. 10, 1904	154	3 y., 9 m., 26 d.[6]

3.—Duration and Sessions of Dominion Parliaments, 1867-1923—concluded.

Number of Parliament.	Session.	Date of Opening.	Date of Prorogation.	Days of session.	Elections, writs returnable, dissolutions, and lengths of Parliaments.[10]
10th Parliament	1st	Jan. 11, 1905	July 20, 1905	191	Nov. 3, 1904.[3]
	2nd	Mar. 8, 1906	July 13, 1906	128	Dec. 15, 1904.[4]
	3rd	Nov. 22, 1906	April 27, 1907	157	Sept. 17, 1908.[5]
	4th	Nov. 28, 1907	July 20, 1908	236	3 y., 9 m., 4 d.[6]
					Oct. 26, 1908.[3]
11th Parliament	1st	Jan. 20, 1909	May 19, 1909	120	Dec. 3, 1908.[4]
	2nd	Nov. 11, 1909	May 4, 1910	175	July 29, 1911.[5]
	3rd	Nov. 17, 1910	July 29, 1911	196[7]	2 y., 7 m., 28 d.[6]
	1st	Nov. 15, 1911	April 1, 1912	139	
	2nd	Nov. 21, 1912	June 6, 1913	173[8]	
	3rd	Jan. 15, 1914	June 12, 1914	148	Sept. 21, 1911.[3]
12th Parliament	4th	Aug. 18, 1914	Aug. 22, 1914	5	Oct. 7, 1911.[4]
	5th	Feb. 4, 1915	April 15, 1915	71	Oct. 6, 1917.[5]
	6th	Jan. 12, 1916	May 18, 1916	127	6 y., 0 m., 0 d.[6]
	7th	Jan. 18, 1917	Sept. 20, 1917	207[9]	
	1st	Mar. 18, 1918	May 24, 1918	68	
	2nd	Feb. 20, 1919	July 7, 1919	138	Dec. 17, 1917.[3]
13th Parliament	3rd	Sept. 1, 1919	Nov. 10, 1919	71	Feb. 27, 1918.[4]
	4th	Feb. 26, 1920	July 1, 1920	127	Oct. 4, 1921.[5]
	5th	Feb. 14, 1921	June 4, 1921	111	3 y., 7 m., 6 d.[6]
14th Parliament	1st	Mar. 8, 1922	June 28, 1922	113	Dec. 6, 1921.[3]
	2nd	Jan. 31, 1923	June 30, 1923	151	Jan. 14, 1922.[4]

[1] Adjourned from 21st December, 1867, to 12th March, 1868, to allow the local Legislatures to meet. [2] Adjourned 23rd May till 13th August. [3] Period of general elections. [4] Writs returnable. [5] Dissolution of Parliament. [6] Duration of Parliament in years, months and days. The life of a Parliament is counted from the date of return of election writs to the date of dissolution, both days inclusive. [7] Not including days (59) of adjournment from May 19th to July 18th. [8] Not including days (25) of adjournment from Dec. 19th, 1912, to Jan. 14th, 1913. [9] Not including days (39) of adjournment from Feb. 7th to April 19th, 1917. [10] The ordinary legal limit of duration for each parliament is five years.

A brief *résumé* of the history of parliamentary representation follows. Attention may be drawn to the growth in the number of members of both the Senate and the House of Commons since Confederation and to the greatly increased unit of representation in the lower house.

The Senate.—The British North America Act, 1867, provides in sections 21 and 22 that "the Senate shall consist of seventy-two members, who shall be styled Senators. In relation to the constitution of the Senate, Canada shall be deemed to consist of three divisions,—(1) Ontario; (2) Quebec); (3) The Maritime Provinces, Nova Scotia and New Brunswick; which three divisions shall be equally represented in the Senate as follows,—Ontario by twenty-four Senators; Quebec by twenty-four Senators; and the Maritime Provinces by twenty-four Senators, twelve thereof representing New Brunswick and twelve thereof representing Nova Scotia. In the case of Quebec, each of the twenty-four Senators representing the province shall be appointed for one of the electoral divisions of Lower Canada specified in schedule A to Chapter I of the Consolidated Statutes of Canada." The upper chamber of the Dominion Parliament, while it has been distinctly secondary in importance to the lower, as in most other bi-cameral legislatures, has still remained an integral part of the Canadian Parliamentary system.

The first increase in the membership of the upper chamber took place in 1871, when Manitoba and British Columbia, upon entering Confederation, were given two and three Senators respectively. In 1873 Prince Edward Island was given four Senators, the representation of Nova Scotia and New Brunswick being reduced by two Senators each. In 1882 Manitoba was given an additional member and in 1892 another. The Northwest Territories, in 1888, were given representation

by two Senators, the number being increased to four in 1904. Saskatchewan and Alberta, on their creation in 1905, were each allotted four seats. At that time the membership by Provinces was:—Ontario, 24; Quebec, 24; Nova Scotia, 10; New Brunswick, 10; Prince Edward Island, 4; British Columbia, 3; Manitoba, 4; Saskatchewan, 4; Alberta, 4, a total of 87 members. Following the increased representation given to the western provinces by the Representation Act, 1914, the number of senators was increased in 1917 to 96 by 5–6 Geo. V, c. 45 (an Act of the Imperial Parliament). A fourth "division," represented by 24 members, and comprising the area of the Dominion situated to the west of Ontario was created, and each of the four western provinces was represented in the Senate by 6 members. While the total number is thus 96, provision is made by the Act for the creation of additional senators by the Governor-General. The total, however, must never exceed a maximum of 104. Senators are entitled to be addressed as "Honourable".

The personnel of the Senate, by provinces, as at Oct. 31, 1923, is shown in Table 4.

4.—Representation in the Senate of Canada, by Provinces, according to the British North America Act, 1867, and amending Acts, as at Oct. 31, 1923.

Names of Senators.	Post Office Address.
Prince Edward Island (4 senators)—	
Yeo, John	Port Hill.
Prowse, Benj. C	Charlottetown.
Murphy, Patrick C	Tignish.
McLean, John	Souris.
Nova Scotia (10 senators)—	
Farrell, Edward M	Liverpool.
Roche, William	Halifax.
Curry, Nathaniel	Amherst.
Ross, Wm. B	Middleton.
Girroir, E. L	Antigonish.
McLennan, John S	Sydney.
Tanner, C. E	Pictou.
Stanfield, John	Truro.
McCormick, John	Sydney Mines.
Martin, Peter	Halifax.
New Brunswick (10 senators)[1]	
Poirier, Pascal	Shediac.
King, G. G	Chipman.
Daniel, J. W	St. John.
Bourque, T. J	Richibucto.
Fowler, G. W	Sussex.
Todd, Irving R	Milltown.
McDonald, J. A	Shediac.
Black, Frank B	Sackville.
Turgeon, Onésiphore	Bathurst.
Quebec (24 senators)[1]—	
Bolduc, Joseph, P.C	St. Victor de Tring.
Montplaisir, H	Three Rivers.
Thibaudeau, A. A	Montreal.
Dandurand, R., P.C	Montreal.
Casgrain, J. P. B	Montreal.
Béique, F. L	Montreal.
Legris, J. H	Louiseville.
Tessier, Jules	Quebec.
David, L. O	Montreal.
Cloran, H. J	Montreal.
Mitchell, Wm	Drummondville.
Dessaulles, G. C	St. Hyacinthe.
Lavergne, Louis	Arthabaska.
Quebec—concluded.	
Wilson, J. M	Montreal.
Pope, Rufus H	Cookshire.
Beaubien, C. P	Montreal.
L'Espérance, D. O	Quebec.
Foster, G. G	Montreal.
White, R. S	Montreal.
Blondin, P. E., P.C	Grand'Mère.
Chapais, Thomas	Quebec.
Webster, L. C	Montreal.
Boyer, Gustave	Rigaud.
Ontario (24 senators)—	
McHugh, Geo	Lindsay.
Belcourt, N. A., P.C	Ottawa.
Ratz, Valentine	New Hamburg.
Gordon, Geo	North Bay.
Smith, E. D	Winona.
McCall, Alexander	Simcoe.
Donnelly, J. J	Pinkerton.
Lynch-Staunton, G	Hamilton.
Robertson, G. D., P.C	Welland.
Blain, Richard	Brampton.
Fisher, J. H	Paris.
Bennett, W. H	Midland.
Webster, John	Brockville.
Mulholland, R. A	Port Hope.
O'Brien, M. J	Renfrew.
White, G. V	Pembroke.
Reid, J. D., P.C	Prescott.
Foster, Sir G. E., P.C	Ottawa.
Kemp, Sir A. E., P.C	Toronto.
Macdonell, A. H	Toronto.
McCoig, A. B	Chatham.
Hardy, A. C	Brockville.
Pardee, F. F	Sarnia.
Aylesworth, Sir A. B., P.C	Toronto.
Manitoba (6 senators)—	
Watson, Robt	Portage la Prairie.
Sharpe, W. H	Manitou.
McMeans, L	Winnipeg.
Bénard, Aimé	Winnipeg.
Schaffner, F. L	Winnipeg.
Bradbury, G. H	Selkirk.

[1]One seat vacant.

4.—Representation in the Senate of Canada, by Provinces, etc.—concluded.

Names of Senators.	Post Office Address.	Names of Senators.	Post Office Address.
Saskatchewan (6 senators)—		**Alberta**—concluded.	
Ross, James H.	Regina.	Harmer, Wm. J.	Edmonton.
Laird, H. W.	Regina.	Griesbach, W. A.	Edmonton.
Willoughby, W. B.	Moosejaw.	Coté, Jean Léon.	Edmonton.
Turriff, J. G.	Ottawa, Ont.		
Calder, J. A., P.C.	Regina.	**British Columbia** (6 senators)-	
Gillis, A. B.	Whitewood.	Bostock, Hewitt, P.C.	Monte Creek.
		Planta, A. E.	Nanaimo.
Alberta (6 senators)—		Barnard, G. H.	Victoria.
Lougheed, Sir J. A., P.C.	Calgary.	Taylor, J. D.	New Westminster.
De Veber, L. George	Lethbridge.	Green, R. F.	Victoria.
Michener, Edward	Red Deer.	Crowe, S. J.	Vancouver.

The House of Commons.—The British North America Act provides under section 37 that "The House of Commons shall consist of one hundred and eighty-one members, of whom eighty-two shall be elected for Ontario, sixty-five for Quebec, nineteen for Nova Scotia and fifteen for New Brunswick." Further, under section 51, provisions were made for decennial re-adjustments of representation in accordance with the results of the decennial census of the Dominion. The section provides that the province of Quebec shall always have a fixed number of 65 members, and that there shall be assigned to each of the other provinces such number of members as will bear the same proportion to the number of its population (ascertained by the census) as the number 65 bears to the population of Quebec (within its area as in 1911). A further provision in subsection 4 of section 51 stipulates that "on any such re-adjustment the number of members for a province shall not be reduced unless the proportion which the number of the population of the province bore to the number of the aggregate population of Canada at the then last preceding re-adjustment of the number of members for the province is ascertained at the then latest census to be diminished by one twentieth part or upwards." By an amendment to the British North America Act passed by the Imperial Parliament in 1915 (5–6 Geo. V, c. 45), it was enacted that "notwithstanding anything in the said Act, a province shall always be entitled to a number of members in the House of Commons not less than the number of senators representing such province." As a consequence of this amendment the representation of Prince Edward Island has remained at 4 members.

Re-adjustments in Provincial Representation.—The first Dominion Parliament was chosen by the electors in the general election held from Aug. 7 to Sept. 20, 1867. Its lower chamber was composed of 181 members, as set out by the foregoing provisions of the British North America Act. During its existence, the inclusion of Manitoba as a province of the Dominion on May 12, 1870, and of British Columbia on July 20, 1871, resulted in the addition of four and six members respectively. As a result of the census of 1871, a further increase took place through the addition of six new members for Ontario, two for Nova Scotia and one for New Brunswick, at the general election of 1872; further, in 1874, after the admission of Prince Edward Island to the Dominion, six members were added from that province. The results of the general election of 1882 again show increased representation arising out of the census of 1881—increases of three for Ontario and one for Manitoba bringing the total number of members up to 210. The elections of 1887, in which an additional member for Ontario and four new members for the Northwest Territories (later Saskatchewan and Alberta) were returned, brought a further increase to a

total of 215. Later redistributions following the censuses of 1891 and 1901 resulted in increases in the number of members from the new electoral districts of the western provinces and the Yukon, and reductions in the representation given to Nova Scotia and New Brunswick, the total number, however, remaining practically the same. The number of members for Ontario also showed, as a consequence of the census of 1901, a decrease, after the election of 1904, from 92 to 86. The results of the four elections of 1891, 1896, 1900 and 1904 show the number of members returned to have been 215, 213, 216 and 214 respectively. In 1908, following the passing of the Representation Act of 1907, a total of 35 members from the Maritime provinces, 10 members each from Manitoba and Saskatchewan, together with 7 from Alberta, a new member for British Columbia and unchanged representation from Quebec and Ontario showed a grand total of 221 members in the House of Commons. No further changes were made until after the election of 1911, when an amendment to the Representation Act provided that the House of Commons should consist of 221 members as follows,—Ontario, 86; Quebec, 65; Saskatchewan, 10; British Columbia, 7; Alberta, 7; Manitoba, 10; Nova Scotia, 18; New Brunswick, 13; Prince Edward Island, 4; Yukon Territory, 1. A further Representation Act of 1914 provided for an increase in the number of members to 235, divided among the provinces as follows,—Ontario, 82; Quebec, 65; Nova Scotia, 16; New Brunswick, 11; Manitoba, 15; British Columbia, 13; Prince Edward Island, 4; Saskatchewan, 16; Alberta, 12; Yukon Territory, 1. This Act is now in force but as a result of the census of 1921 a further Bill, providing for increases in the number of members from the western provinces and for a decrease in the number of members from Nova Scotia and a grand total of 245 members, was given a first reading on February 13, 1923. It establishes the basis on which the fifteenth Parliament of Canada will probably be constituted.

The effect of the various Representation Acts, as shown by the number of members returned to the House of Commons for the various provinces, at the general elections in the years for which figures are given is shown in Table 5.

5.—Representation in the House of Commons of Canada, showing the effect of Representation Acts, 1867 to 1921.

Province.	1867.	1872.	1882.	1896.	1904.	1908.	1911.	1917.	1921.
Ontario	82	88	91	92	86	86	86	82	82
Quebec	65	65	65	65	65	65	65	65	65
Nova Scotia	19	21	21	20	18	18	18	16	16
New Brunswick	15	16	16	14	13	13	13	11	11
Manitoba	–	4	5	7	10	10	10	15	15
British Columbia	–	6	6	6	7	7	7	13	13
Prince Edward Island	–	–	6	5	4	4	4	4	4
Saskatchewan	–	–	–	4	10	10	10	16	16
Alberta	–	–	–			7	7	12	12
Yukon	–	–	–	–	1	1	1	1	1
Total	**181**	**200**	**210**	**213**	**214**	**221**	**221**	**235**	**235**

While the number of members of the House of Commons has been growing fairly steadily since Confederation, the unit of representation—one-sixty-fifth of the population of Quebec within its 1911 boundaries—has also been increased after each census in consequence of the expanding population of Quebec. The units of representation as shown by the six decennial censuses taken since Con-

federation, are as follows:—1871, 18,331 persons; 1881, 20,908; 1891, 22,901; 1901, 25,368; 1911, 30,819; 1921, 36,283.

The Present Redistribution Problem.—The method by which the representation of provinces is determined may be further explained. The population of Quebec, it has been shown, constitutes the basis from which the unit of representation in the other provinces is determined, Quebec's representation of 65 members in the House of Commons remaining constant. The provisions of the Quebec Boundaries Extension Act, 1912, however, while they provided for an enlargement of the area of the province, stipulated that the population of the newly added areas should not be included in any computations relative to representation. Quebec's population in 1921 (excluding the population of Ungava) was 2,358,412, which, divided by 65, gives a unit of representation of 36,283. The quotient, therefore, obtained by dividing the population of each province (Prince Edward Island excepted) as shown at the date of the census, by the unit 36,283 indicates, except where subsection 4 of section 51 of the Act applies, the number of members to which each province is entitled. The method is illustrated in Table 6.

6.—Representation of the Provinces and Territories of Canada in the House of Commons, as determined by the British North America Act and the Censuses of 1911 and 1921.

Province.	Census 1911.			Census 1921.		
	Population.	Quotient based on Unit.	Representation.	Population.	Quotient based on Unit.	Representation.
Prince Edward Island	93,728	3·04	4	88,615	2·44	4
Nova Scotia	492,338	15·98	16	523,837	14·44	14
New Brunswick	351,889	11·42	11	387,876	10·69	11
Ontario	2,527,292	82·00	82	2,933,662	80·86	82
Manitoba	461,394	14·97	15	610,118	16·82	17
Saskatchewan	492,432	15·98	16	757,510	20·88	21
Alberta	374,295	12·14	12	588,454	16·22	16
British Columbia	392,480	12·74	13	524,582	14·46	14
Quebec (without Ungava)	2,003,232	65·00	65	2,358,412	65·00	65
Totals	7,189,080	–	234	8,773,066	–	244
Quebec (Ungava)	2,544[1]	–	–	2,787[1]	–	–
Yukon	8,512	–	1	4,157	–	1
N.W.T.	6,507	–	–	7,988	–	–
R.C. Navy	–	–	–	485	–	–
Canada	**7,206,643**	–	**235**	**8,788,483**	–	**245**

[1] Represents the population in the area added to Quebec by the Quebec Boundaries Extension Act, 1912, the population of which by sec. 2, ss. "A" of said Act, is to be excluded from the population of the province in ascertaining the unit of representation.

From the foregoing figures it is evident that the representation of the four western provinces should be increased while that of Nova Scotia should be diminished.

Again, the application of the provisions of subsection 4 of section 51 of the Act (quoted above) to Nova Scotia and Ontario (the only provinces in which a noticeable decrease in the rate of growth of population is found) is shown in Table 7.

7.—Table showing Application of Section 51, Subsection 4, of British North America Act, to Representation of Ontario and Nova Scotia.

Province.	Proportion which Population of each Province bears to the Total Population of Canada.		Decrease in proportion from 1911 to 1921.	Ratio of Decrease in proportion from 1911 to 1921 to proportion in 1911.	Decrease, greater, equal to or less than one-twentieth of proportion in 1911.
	1911.	1921.			
Ontario	·35069	·33380	·01689	·0481	less.
Nova Scotia	·06831	·05960	·00871	·1275	greater.

The above table shows that under the provisions of section 51, subsection 4 of the B.N.A. Act, no reduction should take place in the representation of Ontario because the proportion which the number of the population of the province bore to the number of the aggregate population of Canada at the readjustment of the number of members for the province based on the census of 1911 is ascertained at the census of 1921 to be diminished by less than one-twentieth part. The proportion for Nova Scotia, having diminished by more than one-twentieth part, the provisions of subsection 4 of section 51 do not apply and the representation of Nova Scotia should be reduced in accordance with the provisions of section 51, sub-sections 2 and 3 of the Act.

Therefore the representation to which each province is entitled as a result of redistribution based upon the 1921 census will be as follows:—Alberta 16, British Columbia 14, Manitoba 17, New Brunswick 11, Nova Scotia 14, Ontario 82, Prince Edward Island 4, Quebec 65, Saskatchewan 21, Yukon 1.[1]

The electoral districts for the House of Commons of Canada, with their populations by the census of 1921, number of qualified voters and numbers voting in 1921, together with the names and addresses of members, as at Oct. 31, 1923, are shown in Table 8.

8.—Representation in the House of Commons, according to the Districts of the Representation Act, 1914, as at Oct. 31, 1923.

Provinces and Districts.	Population, 1921.	Voters on list.	Number of votes polled.[2]	Name of Member.	P.O. Address.
Prince Edward Island (4 members)—					
King's	20,445	11,189	8,728	Hughes, J. J.	Souris, P.E.I.
Prince	31,520	16,172	13,332	MacLean, A. E.	Summerside, P.E.I.
Queen's	36,650	19,518[3]	30,496[3]	Sinclair, Hon. J. E.	Emerald, P.E.I.
				Mackinnon, D. A.	Charlottetown, P.E.I.
Nova Scotia (16 members)—					
Antigonish and Guysborough	27,098	15,104	11,748	McIsaac, C. F.	Antigonish, N.S.
Cape Breton North and Victoria	31,325	16,652	11,588[4]	Kelly, F. L.	North Sydney, N.S.
Cape Breton South and Richmond	76,362	37,635[3]	51,555[3]	Carroll, W. F.	Sydney, N.S.
				Kyte, Geo. W.	St. Peter's, N.S.
Colchester	25,196	15,458	11,483	Putnam, H.	Truro, N.S.
Cumberland	41,191	24,033	17,346	Logan, H. J.	Amherst, N.S.
Digby and Annapolis	28,965	16,368	12,596	Lovett, L. J.	Bear River, N.S.

[1] Under the British North America Act, 1886 (49–50 Vict., chap. 35) the Parliament of Canada is given power to provide for the representation in the Senate and House of Commons of territories forming part of the Dominion of Canada, but not included in any province, In virtue of this provision, the Yukon Territory was by 2 Edw. VII, c. 37, granted representation by one member in the House of Commons.

[2] From Report of Chief Electoral Officer, 1921.

[3] Each voter could vote for two candidates.

[4] Votes and voters from returns of general elections, 1921.

8.—Representation in the House of Commons, according to the Districts of the Representation Act, 1914, as at Oct. 31, 1923—continued.

Provinces and Districts.	Population, 1921.	Voters on list.	Number of votes polled.[1]	Name of Member.	P.O. Address.
Nova Scotia—con.					
Halifax	97,228	53,839[2]	60,639[2]	Finn, R. E.[3]	Halifax, N.S.
				Maclean, Hon. A. K.[5]	Halifax, N.S.
Hants	19,739	11,781	8,843	Martell, L. H	Windsor, N.S.
Inverness	23,808	12,712	8,825	Chisholm, A. W	Margaree Harbour, N.S.
King's	23,723	14,359	10,948	Robinson, E. W	Wolfville, N.S.
Lunenburg	33,742	18,591	12,495	Duff, Wm	Lunenburg, N.S.
Pictou	40,851	27,680	20,014	Macdonald, Hon. E.M.	Pictou, N.S.
Shelburne and Queen's	23,435	13,155	9,877[4]	Fielding, Rt. Hon. W. S.	Ottawa, Ont.
Yarmouth and Clare	31,174	17,106	12,903	Hatfield, P. La C	Yarmouth, N.S.
New Brunswick (11 members)—					
Charlotte	21,435	13,066	10,304	Grimmer, R. W	St. Stephen, N.B.
Gloucester	38,684	16,565	10,632[4]	Robichaud, J. G	Shippigan, N.B.
Kent	23,916	10,847	7,755	Léger, A. T.[5]	Richibucto, N.B.
Northumberland	33,985	17,110	12,112	Morrissy, John	Newcastle, N.B.
Restigouche and Madawaska	42,977	19,108	9,407	Michaud, Pius	Edmundston, N.B.
Royal	32,078	19,492	13,704	Jones, G. B	Apohaqui, N.B.
St. John City and Counties of St. John and Albert	69,093	38,838[2]	45,107[2]	Baxter, Hon. J. B. M.	St. John, N.B.
				MacLaren, Murray	St. John, N.B.
Victoria and Carleton	33,900	18,194	11,822	Caldwell, T. W	Florenceville, N.B.
Westmorland	53,387	29,619	20,670	Copp, Hon. A. B	Ottawa, Ont.
York-Sunbury	38,421	21,736	14,750	Hanson, R. B	Fredericton, N.B.
Quebec (65 members)—					
Argenteuil	17,165	8,927	7,295[4]	Stewart, Hon. Chas	Ottawa, Ont.
Bagot	18,035	9,333	7,214	Marcile, J. E	Actonvale, Que.
Beauce	53,841	20,968	13,442	Béland, Hon. H. S	Ottawa, Ont.
Beauharnois	19,888	10,076	8,541	Papineau, L. J	Valleyfield, Que.
Bellechasse	21,190	9,157	6,335	Fournier, C. A	St. Charles Co., Bellechasse, Que.
Berthier	19,817	9,462	7,540	Gervais, Théodore	Berthier (en haut), Que.
Bonaventure	29,092	13,090	7,781	Marcil, Hon. Chas	Ottawa, Ont.
Brome	13,471	7,441	5,978	McMaster, A. R	Westmount, Que.
Chambly-Verchères	34,643	14,800	13,844	Archambault, J	Montreal, Que.
Champlain	48,009	21,377	16,982	Desaulniers, A. L	Ste. Anne de la Pérade, Que.
Charlevoix-Montmorency	28,874	12,589	10,646	Casgrain, P. F	Montreal, Que.
Chateauguay-Huntingdon	26,731	13,427	10,582	Robb, Hon. J. A	Ottawa, Ont.
Chicoutimi-Saguenay	90,609	34,432	27,152	Savard, Edmond	Chicoutimi, Que.
Compton	32,285	15,561	12,144	Hunt, A. B	Bury, Que.
Dorchester	28,954	11,898	8,474	Cannon, Lucien	Quebec, Que.
Drummond and Arthabaska	44,823	19,925	15,882	Laflamme, J. N. K	Montreal, Que.
Gaspé	40,375	17,063	12,092	Lemieux, Hon. R	Ottawa, Ont.
Hull	43,541	20,873	14,543	Fontaine, J. E	Hull, Que.
Joliette	25,913	12,370	10,275	Denis, J. J	Joliette, Que.
Kamouraska	22,014	10,139	7,367[4]	Bouchard, G	Ste. Anne de la Pocatière, Que.
Labelle	35,927	14,654	10,447	Fortier, H. A	Hull, Que.
Laprairie and Napierville	20,065	9,691	5,675	Lanctôt, Roch	St. Constant, Que.
L'Assomption-Montcalm	28,318	14,183	9,788	Seguin, P. A	L'Assomption, Que.
Laval-Deux Montagnes	38,314	13,575	10,095	Ethier, J. A. C	St. Scholastique, Que.
Levis	33,323	15,465	12,864	Bourassa, J. B	St. Romuald, Que.

[1] From Report of Chief Electoral Officer, 1921.
[2] Each voter could vote for 2 candidates.
[3] Mr. Finn was elected on Dec. 4, 1922.
[4] Votes and voters from returns of general elections, 1921. Rt. Hon. Mr. Fielding, Mr. Robichaud, Hon. Mr. Stewart and Mr. Bouchard were elected by acclamation on Jan. 19, Nov. 20, Feb. 28 and May 15, 1922, respectively.
[5] This seat is now vacant.

8.—Representation in the House of Commons, according to the Districts of the Representation Act, 1914, as at Oct. 31, 1923.—continued.

Provinces and Districts.	Population, 1921.	Voters on list.	Number of votes polled.[1]	Name of Member.	P.O. Address.
Quebec—con.					
L'Islet	17,859	7,743	5,878	Fafard, J. F.	L'Islet Co., L'Islet, Que.
Lotbinière	21,837	10,064	7,566	Vien, Thos.	Quebec, Que.
Maskinongé	16,945	7,959	6,133	Desrochers, E.	St. Didace Co., Maskinongé, Que.
Matane	36,303	15,189	10,411	Pelletier, F. J.	Matane, Que.
Megantic	33,633	14,188	10,516[2]	Roberge, E.	Laurierville, Que.
Missisquoi	17,709	9,558	8,097	Kay, W. F.	Phillipsburg, Que.
Montmagny	21,997	10,245	6,507	Déchêne, A. M.	Montmagny, Que.
Montreal Island—					
Hochelaga	73,526	30,322	22,573	St. Père, E. C.	Montreal, Que.
Jacques Cartier	89,297	42,636	30,131[2]	Rhéaume, J. T.	Montreal, Que.
Laurier-Outremont	72,047	31,492	21,725[2]	Gouin, Hon. Sir Lomer	Ottawa, Ont.
Maisonneuve	64,933	24,838	18,487	Robitaille, C.	Maisonneuve, Que.
St. Ann	52,049	22,024	17,453	Walsh, J. C.	Montreal, Que.
St. Denis	78,920	33,418	23,948	Denis, J. A.	Montreal, Que.
Westmount-St. Henry	62,909	30,906	25,042	Mercier, Paul	Montreal, Que.
St. James	42,443	17,593	12,906	Rinfret, F.	Montreal, Que.
St. Antoine	32,394	17,155	14,464	Mitchell, W. G.	Montreal, Que.
St. Lawrence-St. George	36,912	16,754	13,774	Marler, H.	Montreal, Que.
George Etienne Cartier	54,800	19,523	13,946	Jacobs, S. W.	Montreal, Que.
St. Mary	63,975	27,330	20,635	Deslauriers, H.	Montreal, Que.
Nicolet	29,695	13,536	10,632[2]	Descoteaux, J. F.	St. Monique, Que.
Pontiac	46,201	24,326	16,701	Cahill, F. S.	Campbell's Bay, Que.
Portneuf	34,452	15,772	11,259	Delisle, M. S.	Portneuf, Que.
Quebec County	31,130	13,249	11,409	Lavigueur, H. E.	Quebec, Que.
Quebec East	38,330	14,736	10,490[2]	Lapointe, Hon. E.	Ottawa, Ont.
Quebec South	27,706	12,971	10,667	Power, C. G.	Quebec, Que.
Quebec West	37,993	16,104	13,486	Parent, Geo.	Quebec, Que.
Richelieu	18,764	9,095	6,758	Cardin, P. J. A.	Sorel, Que.
Richmond and Wolfe	42,248	18,420	13,372	Tobin, E. W.	Bromptonville, Que.
Rimouski	27,520	11,221	7,642	d'Anjou, J. E. S. E.	Rimouski, Que.
St. Hyacinthe-Rouville	36,754	17,636	14,076	Morin, L. S. R.	St. Hyacinthe, Que.
St. Johns and Iberville	23,518	11,388	8,765	Benoit, A. J.	Iberville, Que.
Shefford	25,644	12,003	9,044	Boivin, G. H.	Granby, Que.
Sherbrooke	30,786	17,290	13,661	McCrea, F. N.	Sherbrooke, Que.
Stanstead	23,380	12,619	10,041	Baldwin, W. K.	Coaticook, Que.
Témiscouata	44,310	18,141	13,837	Gauvreau, C. A.	Fraserville, Que.
Terrebonne	33,908	15,270	12,593	Prevost, J. E.	St. Jerôme, Que.
Three Rivers and St. Maurice	50,845	24,570	0,803[2]	Bureau, Hon. J.	Ottawa, Ont.
Vaudreuil-Soulanges	21,620	10,397	8,473	Ouimet, J. R.	St. Polycarpe, Que.
Wright	21,850	10,169	7,737	Gendron, R. M.	Maniwaki, Que.
Yamaska	18,840	8,715	6,638	Boucher, Aimé	Pierreville, Que.
Ontario (82 members)					
Algoma, E.	40,618	16,879	12,356	Carruthers, John	Little Current, Ont.
Algoma, W.	33,676	16,091	10,728	Simpson, T. E.	Sault Ste. Marie, Ont.
Brant	20,085	11,174	8,134	Good, W. C.	Paris, Ont., R.R. 4.
Brantford	33,292	18,537	13,049	Raymond, W. G.	Brantford, Ont.
Bruce, N.	20,872	12,278	10,467	Malcolm, James	Kincardine, Ont.
Bruce, S.	23,413	13,752	10,871	Findlay, J. W.	Elmwood, Ont., R.R. 1.
Carleton	32,673	17,185	13,473	Garland, W. F.	Ottawa, Ont.
Dufferin	15,415	10,260	7,823	Woods, R. J.	Corbetton, Ont., R.R. 2.
Dundas	24,388	15,184	11,255	Elliott, Preston	Chesterville, Ont.
Durham	24,629	16,392	12,516	Bowen, Fred. W.	Newcastle, Ont., R.R. 2.
Elgin, E.	17,306	11,057	8,186	Stansell, J. L.	Staffordville, Ont.
Elgin, W.	27,678	19,027	12,041	McKillop, H. C.	West Lorne, Ont.
Essex, N.	71,150	40,837	19,840	Healy, A. F.	Windsor, Ont.
Essex, S.	31,425	17,242	12,410[2]	Graham, Hon. G. P.	Ottawa, Ont.
Ft. William and Rainy River	39,661	16,912	11,090	Manion, Hon. R. J.	Fort William, Ont.
Frontenac	20,390	11,694	9,358	Reed, W. S.	Harrowsmith, Ont., R.R. 2.

[1] From Report of Chief Electoral Officer, 1921.

[2] Votes and voters from returns of general election, 1921. Messrs. Roberge, Rhéaume, Gouin, Lapointe, Descoteaux, Bureau and Graham were elected by acclamation on Nov. 20, Nov. 20, Jan. 19, Jan. 19, May 14, May 21 and Jan. 19, 1922, respectively.

8.—Representation in the House of Commons, according to the Districts of the Representation Act, 1914, as at Oct. 31, 1923—continued.

Provinces and Districts.	Population, 1921.	Voters on list.	Number of votes polled.[1]	Name of Member.	P.O. Address.
Ontario—con.					
Glengarry and Stormont	38,573	21,145	16,224	Kennedy, J. W	Apple Hill, Ont.
Grenville	16,644	10,748	7,331	Meighen, Rt. Hon. A	Ottawa, Ont.
Grey, N	30,667	18,945	14,996	Duncan, M. R	Owen Sound, Ont.
Grey, S. E	28,384	17,371	13,996	Macphail, Agnes C	Ceylon, Ont.
Haldimand	21,287	13,106	9,828	Senn, M. C	Caledonia, Ont., R.R. 3.
Halton	24,899	15,685	12,207	Anderson, R. K	Milton, Ont.
Hamilton, E	49,820	32,092	15,162	Mewburn, Hon. S. C	Hamilton, Ont.
Hamilton, W	39,298	28,342	13,553	Stewart, T. J	Hamilton, Ont.
Hastings, E	23,072	12,613	9,852	Thompson, T. H	Madoc, Ont.
Hastings, W	34,451	19,029	13,488	Porter, E. G	Belleville, Ont.
Huron, N	23,540	15,227	11,838	King, J. W	Bluevale, Ont.
Huron, S	23,548	14,735	12,148	Black, Wm	Seaforth, Ont., R.R. 3.
Kent	52,139	30,590	23,629[3]	Murdock, Hon. J	Ottawa, Ont.
Kingston	24,104	16,789	11,974	Ross, A. E	Kingston, Ont.
Lambton, E	25,801	15,704	12,532	Fansher, B. W	Florence, Ont.
Lambton, W	32,888	20,301	15,314	LeSueur, R. V	Sarnia, Ont.
Lanark	32,993	20,885	15,571	Preston, R. F	Carleton Place, Ont.
Leeds	34,909	22,526	17,298	Stewart, H. A	Brockville, Ont.
Lennox and Addington	18,994	11,962	9,371	Sexsmith, E. J	Bath, Ont.
Lincoln	48,625	28,778	17,433	Chaplin, J. D	St. Catharines, Ont.
London	53,838	32,907	22,026	White, J. F	London, Ont.
Middlesex, E	27,994	15,945	10,712	Hodgins, A. L	Ettrick, Ont.
Middlesex, W	25,033	15,342	12,027	Drummond, J. D. F	Ailsa Craig, Ont., R.R. 3.
Muskoka	19,439	11,175	7,189	Hammell, W. J	Raymond, Ont.
Nipissing	58,565	30,022	18,834	Lapierre, E. A	Sudbury, Ont.
Norfolk	26,366	15,943	11,686	Wallace, J. A	Simcoe, Ont., R.R. 4.
Northumberland	30,512	18,444	14,733	Maybee, M. E	Trenton, Ont., R.R. 6.
Ontario, N	15,420	9,478	7,708	Halbert, R. H	Uxbridge, Ont.
Ontario, S	31,074	17,968	13,158	Clifford, L. O	Oshawa, Ont.
Ottawa	93,740	67,821	84,369[2]	Chevrier, E. R. E McGiverin, H. B	Ottawa, Ont. Ottawa, Ont.
Oxford, N	24,527	15,043	12,149	Sinclair, D. J	Woodstock, Ont.
Oxford, S	22,235	14,175	11,236	Sutherland, D	Ingersoll, Ont.
Parkdale	80,780	52,233	18,956	Spence, David	Toronto, Ont.
Parry Sound	27,022	13,365	9,190	Arthurs, James	Powassan, Ont.
Peel	23,896	16,037	12,057	Charters, Samuel	Brampton, Ont.
Perth, N	32,461	19,072	14,811	Rankin, J. P	Stratford, Ont.
Perth, S	18,382	11,291	9,102	Forrester, Wm	Mitchell, Ont.
Peterborough, E	13,716	8,032	6,471	Brethen, G. A	Norwood, Ont., R.R. 1.
Peterborough, W	29,318	18,001	11,655	Gordon, G. N	Peterborough, Ont.
Port Arthur and Kenora	43,300	17,438	10,814	Kennedy, D	Dryden, Ont.
Prescott	26,478	12,726	8,821	Binette, Joseph	St. Anne de Prescott, Ont.
Prince Edward	16,806	10,809	8,943	Hubbs, John	Picton, Ont.
Renfrew, N	23,856	13,368	10,252	McKay, Matthew	Pembroke, Ont.
Renfrew, S	27,061	14,550	11,440[3]	Low, Hon. Thos. A.[4]	Renfrew, Ont.
Russell	43,413	21,879	15,965[3]	Murphy, Hon. Chas	Ottawa, Ont.
Simcoe, E	37,122	20,409	15,697	Chew, Manley	Midland, Ont.
Simcoe, N	22,100	13,737	10,347	Ross, T. E	Guthrie, Ont.
Simcoe, S	24,810	15,130	11,329	Boys, W. A	Barrie, Ont.
Timiskaming	51,568	27,363	16,926	McDonald, A	Cobalt, Ont.
Toronto, Centre	51,768	30,528	11,161	Bristol, Hon. E	Toronto, Ont.
Toronto, E	64,825	39,435	15,002	Ryckman, E. B	Toronto, Ont.
Toronto, N	72,478	47,622	20,985	Church, T. L	Toronto, Ont.
Toronto, S	37,596	31,907	7,566	Sheard, Chas	Toronto, Ont.
Toronto, W	68,397	37,199	11,764	Hocken, H. C	Toronto, Ont.
Victoria	33,995	20,433	15,886	Thurston, J. J	Fenelon Falls, Ont.
Waterloo, N	41,698	23,778	12,531	Euler, W. D	Kitchener, Ont.
Waterloo, S	33,568	21,484	14,149	Elliott, Wm	Galt, Ont., R.R. 7.
Welland	66,668	30,947	21,259	German, W. M	Welland, Ont.
Wellington, N	19,833	12,204	9,029	Pritchard, John	Harriston, Ont.
Wellington, S	34,327	23,008	16,957	Guthrie, Hon. Hugh	Guelph, Ont.

[1] From Report of Chief Electoral Officer, 1921.
[2] Each voter could vote for two candidates.
[3] Votes and voters from returns of general election, 1921. Hon. Mr. Murdock and Hon. Mr. Murphy were elected by acclamation on Jan. 19, 1922.
[4] Hon. Mr. Low was elected by acclamation after his appointment to office on Aug. 17, 1923.

8.—Representation in the House of Commons, according to the Districts of the Representation Act, 1914, as at Oct. 31, 1923—continued.

Provinces and Districts.	Population, 1921.	Voters on list.	Number of votes polled.[1]	Name of Member.	P.O. Address.
Ontario—con.					
Wentworth	64,449	37,976	21,857	Wilson, G. C	Dundas, Ont.
York, E	77,950	48,783	18,536	Harris, J. H	Toronto, Ont.
York, N	23,136	14,418	12,273[2]	King, Rt. Hon. W. L. M	Ottawa, Ont.
York, S	100,054	58,499	21,723	Maclean, W. F	Toronto, Ont.
York, W	70,681	41,925	19,719	Drayton, Hon. Sir H. L.	Ottawa, Ont.
Manitoba (15 members)—					
Brandon	40,183	18,896	14,126	Forke, Robert	Pipestone, Man.
Dauphin	35,482	15,281	9,974	Ward, W. J	Dauphin, Man.
Lisgar	29,921	9,739	7,783	Brown, J. L	Pilot Mound, Man.
Macdonald	23,824	11,744	9,084	Lovie, W. J	Holland, Man.
Marquette	41,254	19,828	14,864	Crerar, Hon. T. A	Winnipeg, Man.
Neepawa	28,356	13,539	10,069	Milne, Robert	Mekiwin, Man.
Nelson	19,806	5,888	4,181	Bird, T. W	Swan River, Man.
Portage la Prairie	22,254	10,491	8,615	Leader, Harry	Burnside, Man.
Provencher	29,308	9,859	6,824	Beaubien, A. L	St. John Baptiste, Man.
Selkirk	55,395	21,997	14,926	Bancroft, L. P	Gunton, Man.
Souris	26,410	13,953	11,110	Steedsman, James	Deloraine, Man.
Springfield	58,870	19,832	12,454	Hoey, R. A	Winnipeg, Man.
Winnipeg, Centre	76,470	35,000	19,643	Woodsworth, J. S	Winnipeg, Man.
Winnipeg, N	62,957	17,623	10,647	McMurray, E. J.[2]	Winnipeg, Man.
Winnipeg, S	59,628	31,473	19,641	Hudson, A. B	Winnipeg, Man.
Saskatchewan (16 members)—					
Assiniboia	34,789	15,411	11,640	Gould, O. R	Manor, Sask.
Battleford	33,641	16,077	10,822	McConica, T. H	Luseland, Sask.
Humboldt	55,225	24,135	16,264	Stewart, C. W	Lac Vert, Sask.
Kindersley	44,772	24,163	17,002	Carmichael, A. M	Kindersley, Sask.
Last Mountain	50,055	20,195	12,720	Johnston, J. F	Bladworth, Sask.
Mackenzie	55,629	17,931	11,706	Campbell, M. N	Pelly, Sask.
Maple Creek	56,064	25,284	17,256	McTaggart, N. H	Gull Lake, Sask.
Moosejaw	50,403	25,896	16,322	Hopkins, E. N	Moosejaw, Sask.
N. Battleford	47,381	20,696	14,196	Davies, C. C	N. Battleford, Sask.
Prince Albert	56,829	25,496	15,983	Knox, Andrew	Prince Albert, Sask.
Qu'Appelle	34,836	16,021	12,100	Millar, John	Indian Head, Sask.
Regina	49,977	24,389	17,388[2]	Motherwell, Hon. W. R.	Ottawa, Ont.
Saltcoats	43,795	15,602	11,084	Sales, Thomas	Tantallon, Sask.
Saskatoon	55,151	26,507	15,066	Evans, John	Nutana, Sask.
Swift Current	53,375	23,776	16,290	Lewis, A. J	Lawson, Sask.
Weyburn	35,668	14,263	9,247	Morrison, John	Yellow Grass, Sask.
Alberta (12 members)—					
Battle River	49,173	22,111	15,389	Spencer, H. E	Edgerton, Alta.
Bow River	55,356	24,720	15,569	Garland, E. J	Rumsey, Alta.
Calgary, E	44,995	22,591	14,285	Irvine, William	Calgary, Alta.
Calgary, W	44,341	23,534	16,181	Shaw, J. T	Calgary, Alta.
Edmonton, E	56,548	27,755	13,440	Kellner, D. F	Egremont, Alta.
Edmonton, W	74,267	38,557	23,167	Kennedy, D. M	Waterhole, Alta.
Lethbridge	37,699	14,570	10,106	Jelliff, L. H	Raley, Alta.
Macleod	34,008	15,148	10,212	Coote, G. G	Cayley, Alta.
Medicine Hat	43,179	21,449	14,212	Gardiner, Robert	Excel, Alta.
Red Deer	49,629	23,190	15,746	Speakman, A	Penhold, Alta.
Strathcona	42,520	18,611	11,350	Warner, D. W	Edmonton, Alta.
Victoria	56,739	21,470	14,167	Lucas, W. T	Lougheed, Alta.
British Columbia (13 members)—					
Burrard	69,922	35,463	21,991	Clark, J. A	Vancouver, B.C.
Cariboo	39,834	16,055	11,135	McBride, T. G	Stump Lake, Kamloops, B.C.
Comox-Alberni	32,009	11,357	7,725	Neill, A. W	Alberni, B.C.
Fraser Valley	28,811	11,130	8,452	Munro, E. A	Chilliwack, B.C., R.R. 2.
Kootenay, E	19,137	14,634	5,201	King, Hon. J. H	Ottawa, Ont.
Kootenay, W	30,502	12,874	9,856	Humphrey, L. W	Nelson, B.C.
Nanaimo	48,010	21,300	15,066	Dickie, C. H	Duncan, B.C.

[1] From Report of Chief Electoral Officer, 1921.

[2] Votes and voters from returns of general election, 1921. Rt. Hon. Mr. King, and Hon. Mr. Motherwell were elected by acclamation on Jan. 19, 1922, Hon. Mr. McMurray was elected on Oct. 24, 1923, after his appointment to office.

8.—Representation in the House of Commons according to the Districts of the Representation Act, 1914, as at June 30, 1923.—concluded.

Provinces and Districts.	Population, 1921.	Voters on list.	Number of votes polled.[1]	Name of Member.	P.O. Address.
Br. Columbia—con.					
New Westminster...	45,982	18,983	12,765	McQuarrie, W. G.....	New Westminster, B.C.
Skeena.....	28,934	9,605	6,579	Stork, Alfred.....	Prince Rupert, B.C.
Vancouver, Centre...	60,879	31,436	18,219	Stevens, Hon. H. H.....	Vancouver, B.C.
Vancouver, S.....	46,137	19,847	12,985	Ladner, L. J.....	Vancouver, B.C.
Victoria City.....	38,727	18,563	12,603	Tolmie, Hon. S. F.....	Victoria, B.C.
Yale.....	35,698	16,228	12,468	MacKelvie, J. A.....	Vernon, B.C.
Yukon Territory (1 member)—					
Yukon.....	4,157	1,658	1,388	Black, George.....	Dawson, Y.T.

[1] Votes and voters from returns of general election, 1921.

II.—PROVINCIAL GOVERNMENTS.

Table 9 gives the names and areas, as in 1923, of the several provinces, territories and provisional districts of the Dominion, together with the dates of their creation or admission into the Confederation and the legislative process by which this was effected.

9.—Provinces and Territories of Canada, with present Areas, Dates of Admission to Confederation and Legislative Process by which this was effected.

Province, Territory or District.	Date of Admission or Creation.	Legislative Process.	Present Area (square miles).		
			Land.	Water.	Total.
Ontario.....	July 1, 1867..	Act of Imperial Parliament—The British North America Act, 1867 (30-31 Vict., c. 3), and Imperial Order in Council of May 22, 1867.	365,880	41,382	407,262[1]
Quebec.....	" 1, 1867..		690,865	15,969	706,834[2]
Nova Scotia.....	" 1, 1867..		21,068	360	21,428
New Brunswick.....	" 1, 1867..		27,911	74	27,985
Manitoba.....	" 15, 1870..	Manitoba Act, 1870 (33 Vict., c. 3) and Imperial Order in Council, June 23, 1870.	231,926	19,906	251,832[3]
British Columbia....	" 20, 1871..	Imperial Order in Council, May 16, 1871.	353,416	2,439	355,855
Prince Edward Island.	" 1, 1873..	Imperial Order in Council, June 26, 1873.	2,184	–	2,184
Saskatchewan.....	Sept. 1, 1905..	Saskatchewan Act, 1905 (4-5 Edw. VII, c. 42).	243,381	8,319	251,700[4]
Alberta.....	" 1, 1905..	Alberta Act, 1905 (4-5 Edw. VII, c. 3).	252,925	2,360	255,285[4]
Yukon.....	June 13, 1898..	Yukon Territory Act, 1898 (61 Vict., c. 6).	206,427	649	207,076
Mackenzie.....	Jan. 1, 1920..	Order in Council, March 16, 1918	501,953	27,447	529,400[5]
Keewatin.....	" 1, 1920..		205,973	6,851	212,824[5]
Franklin.....	" 1, 1920..		500,000	–	500,000[5]
Total.....	.....	.....	**3,603,909**	**125,756**	**3,729,665**

[1] This area was increased by the Canada (Ontario Boundary) Act, 1889, and the Ontario Boundaries Extension Act, 1912 (2 Geo. V, c. 40).

[2] Increased by Order in Council of July 6, 1896, and Quebec Boundaries Extension Act, 1912 (2 Geo. V, c. 45).

[3] Increased by Extension of Boundaries of Manitoba Act, 1881, and Manitoba Boundaries Extension Act, 1912 (2 Geo. V, c. 32).

[4] Alberta and Saskatchewan now cover approximately the area formerly comprised in the districts of Assiniboia, Athabasca, Alberta and Saskatchewan, established May 17, 1882, by minute of Canadian P. C. concurred in by Dominion Parliament and Order in Council of Oct. 2, 1895.

[5] By an Order in Council of June 23, 1870, Rupert's Land, acquired under the Rupert's Land Acts of 1867 and 1868, and the undefined Northern Territories were admitted into the Confederation. The original Northwest Territories, mentioned in the Manitoba Act, 1870, was established by the Northwest Territories Act, 1880 (43 Vict., c. 25), the district of Keewatin having been previously defined by an Act of the Dominion Parliament (39 Vict., c. 21). The provisional districts of Yukon, Mackenzie, Franklin and Ungava were defined in an Order in Council of Oct. 2, 1895, their boundaries being changed by Order in Council of Dec. 18, 1897. By Order in Council of July 24, 1905, the area of Keewatin not included in the Northwest Territories was annexed to the latter from Sept. 1. 1905. By the Extension of Boundaries Act, 1912, Ungava was made a part of the province of Quebec and the remaining area of the Northwest Territories south of 60° N. latitude was divided between Manitoba and Ontario.

Lieutenant-Governors, Legislatures and Ministries in the Provinces.—In each of the provinces the King is represented by a Lieutenant-Governor, appointed by the Governor-General in Council, and governing with the advice and assistance of his Ministry or Executive Council which is responsible to the Legislature and resigns office when it ceases to enjoy the confidence of that body. The Legislatures of all the provinces with the exception of Quebec and Nova Scotia are uni-cameral, consisting of a Legislative Assembly elected by the people. In Quebec and Nova Scotia there is a Legislative Council as well as a Legislative Assembly.

The Lieutenant-Governors of the provinces, details regarding the Legislatures and Ministries since Confederation, together with the names of the Ministers of the present administrations, are given in Table **10**. For a detailed description of the Provincial Governments the reader is referred to Section IV of the Year Book, "Provincial and Local Government."

10.—Lieutenant-Governors, Legislatures and Ministries of Provinces, 1867-1923.

PRINCE EDWARD ISLAND.

LIEUTENANT-GOVERNORS.

Name.	Date of Appointment.	Name.	Date of Appointment.
W. C. F. Robinson	June 10, 1873	P. A. MacIntyre	May 13, 1899
Sir Robert Hodgson	Nov. 22, 1873	D. A. McKinnon	Oct. 3, 1904
Thomas H. Haviland	July 14, 1879	Benjamin Rogers	June 1, 1910
Andrew Archibald Macdonald	Aug. 1, 1884	A. C. Macdonald	June 2, 1915
Jedediah S. Carvell	Sept. 21, 1889	Murdock McKinnon	Sept. 3, 1919
Geo. W. Howlan	Feb. 21, 1894		

LEGISLATURES.

Legislature.	Number of Sessions.	Date of First Opening.	Date of Dissolution.
1st	3	Mar. 5, 1874	July 1, 1876
2nd	3	Mar. 15, 1877	Mar. 12, 1879
3rd	4	April 24, 1879	April 15, 1882
4th	4	Mar. 20, 1883	June 5, 1886
5th	3	Mar. 29, 1887	Jan. 7, 1890
6th	4	Mar. 27, 1890	Nov. 18, 1893
7th	4	Mar. 28, 1894	June 2, 1897
8th Gen. Assembly	3	April 5, 1898	Nov. 14, 1900
9th Gen. Assembly	4	Mar. 19, 1901	Nov. 9, 1904
10th Gen. Assembly	4	Feb. 8, 1905	Oct. 15, 1908
11th Gen. Assembly	3	Feb. 2, 1909	Dec. 5, 1911
12th Gen. Assembly	4	Mar. 7, 1912	Aug. 21, 1915
13th Gen. Assembly	5	Mar. 29, 1916	June 26, 1919
14th Gen. Assembly	4	Mar. 6, 1920	June 14, 1923

MINISTRIES.

Ministry.	Premier.	Date of Formation.
1	Hon. L. C. Owen	July —, 1873
2	Hon. L. H. Davies	Aug. —, 1876
3	Hon. W. W. Sullivan	April —, 1879
4	Hon. N. McLeod	Nov. —, 1889
5	Hon. F. Peters	April —, 1891
6	Hon. A. B. Warburton	Oct. —, 1897
7	Hon. D. Farquharson	Aug. —, 1898
8	Hon. A. Peters	Dec. 29, 1901
9	Hon. F. L. Haszard	Feb. 1, 1908
10	Hon. James Palmer	May 16, 1911
11	Hon. John A. Mathieson	Dec. 2, 1911
12	Hon. Aubin E. Arsenault	June 21, 1917
13	Hon. J. H. Bell	Sept. 9, 1919
14	Hon. J. D. Stewart	Sept. 5, 1923

10.—Lieutenant-Governors, Legislatures and Ministries of Provinces, 1867-1923—con.

THE STEWART (PRESENT) MINISTRY.

Office.	Name.	Date of Appointment.
Premier, President of the Council, and Attorney and Advocate General	Hon. J. D. Stewart	Sept. 5, 1923
Provincial Secretary—Treasurer and Commissioner of Agriculture	Hon. J. H. Myers	Sept. 5, 1923
Commissioner of Public Works	Hon. J. A. Macdonald	Sept. 5, 1923
Minister without Portfolio	Hon. J. A. McNeill	Sept. 5, 1923
Minister without Portfolio	Hon. Murdock Kennedy	Sept. 5, 1923
Minister without Portfolio	Hon. L. J. Wood	Sept. 5, 1923
Minister without Portfolio	Hon. A. P. Prowse	Sept. 5, 1923
Minister without Portfolio	Hon. W. J. P. McMillan	Sept. 5, 1923
Minister without Portfolio	Hon. A. F. Arsenault	Sept. 5, 1923

NOVA SCOTIA.

LIEUTENANT-GOVERNORS.

Name.	Date of Appointment.	Name.	Date of Appointment.
Lieut.-Gen. Sir W. F. Williams	July 1, 1867	Malachy Bowes Daly	July 11, 1890
Major-Gen. Sir C. Hastings Doyle	Oct. 18, 1867	Malachy Bowes Daly	[1]July 29, 1895
Lieut.-Gen. Sir C. Hastings Doyle	[1]Jan. 31, 1868	Alfred G. Jones	Aug. 7, 1900
Sir E. Kenny (acting)	May 31, 1870	Duncan C. Fraser	Mar. 27, 1906
Joseph Howe	May 1, 1873	James D. McGregor	Oct. 18, 1910
A. G. Archibald	July 4, 1873	David MacKeen	Oct. 19, 1915
Matthew Henry Richey	July 4, 1883	McCallum Grant	Nov. 29, 1916
A. W. McLelan	July 9, 1888	McCallum Grant	[1]Mar. 21, 1922

[1]Second term.

LEGISLATURES.

Legislature.	Number of Sessions.	Date of First Opening.	Date of Dissolution.
1st	4	Jan. 30, 1868	April 17, 1871
2nd	3	Feb. 22, 1872	Nov. 23, 1874
3rd	4	Mar. 11, 1875	Aug. 21, 1878
4th	4	Mar. 6, 1879	May 23, 1882
5th	4	Feb. 8, 1883	May 20, 1885
6th	4	Mar. 10, 1887	April 21, 1890
7th	4	April 2, 1891	Feb. 15, 1894
8th	3	Jan. 31, 1895	Mar. 20, 1897
9th	4	Jan. 27, 1898	Sept. 3, 1901
10th	4	Feb. 13, 1902	May 27, 1906
11th	5	Feb. 19, 1906	May 15, 1911
12th	6	Feb. 23, 1911	May 22, 1916
13th	4	Feb. 22, 1917	June 28, 1920
14th	–	Mar. 9, 1921	—

MINISTRIES.

Ministry.	Premier.	Date of Formation.
1	Hon. H. Blanchard	July 4, 1867
2	Hon. Wm. Annard	Nov. 7, 1867
3	Hon. P. C. Hill	May —, 1875
4	Hon. S. D. Holmes	Oct. —, 1878
5	Hon. J. S. D. Thompson	May —, 1882
6	Hon. W. T. Pipes	Aug. —, 1882
7	Hon. W. S. Fielding	July —, 1884
8	Hon. Geo. H. Murray	July 20, 1896
9	Hon. E. H. Armstrong	Jan. 24, 1923

10.—Lieutenant-Governors, Legislatures and Ministries of Provinces, 1867-1923—con.

THE ARMSTRONG (PRESENT) MINISTRY.

Office.	Name.	Date of Appointment.
Premier, President of Council, and Minister of Public Works and Mines.	Hon. E. H. Armstrong	Jan. 24, 1923
Provincial Secretary	Hon. D. A. Cameron	Jan. 24, 1923
Attorney General	Hon. W. J. O'Hearn	Jan. 24, 1923
Minister of Highways	Hon. W. Chisholm	Jan. 24, 1923
Minister without Portfolio	Hon. R. M. Macgregor	June 28, 1911
Minister without Portfolio	Hon. O. T. Daniels.	Jan. 24, 1923
Minister without Portfolio	Hon. J. C. Tory	Mar. 22, 1921
Minister without Portfolio	Hon. J. W. Comeau	May 26, 1921
Minister without Portfolio	Hon. J. McKinley	Feb. 13, 1923
Minister without Portfolio	Hon. J. A. McDonald	Feb. 13, 1923

NEW BRUNSWICK.

LIEUTENANT-GOVERNORS.

Name.	Date of Appointment.	Name.	Date of Appointment.
Major-Gen. Sir C. Hastings Doyle	July 1, 1867	John A. Fraser	Dec. 20, 1893
Col. F. P. Harding	Oct. 18, 1867	A. R. McClelan	Dec. 9, 1896
L. A. Wilmot	July 14, 1868	Jabez B. Snowball	Feb. 5, 1902
Samuel Leonard Tilley	Nov. 5, 1873	L. J. Tweedie	Mar. 2, 1907
E. Baron Chandler	July 16, 1878	Josiah Wood	Mar. 6, 1912
Robert Duncan Wilmot	Feb. 11, 1880	G. W. Ganong	June 29, 1916
Sir Samuel Leonard Tilley	Oct. 31, 1885	William Pugsley	Nov. 6, 1917
John Boyd	Sept. 21, 1893	William F. Todd	Feb. 24, 1923

LEGISLATURES.

Legislature.	Number of Sessions.	Date of First Opening.	Date of Dissolution.
1st	3	Feb. 13, 1868	June 3, 1870
2nd	5	Feb. 16, 1870	May 15, 1874
3rd	5	Feb. 18, 1875	May 14, 1878
4th	4	Feb. 27, 1879	May 25, 1882
5th	5	Feb. 28, 1883	April 2, 1886
6th	3	Mar. 3, 1887	Dec. 30, 1889
7th	3	Mar. 13, 1890	Sept. 28, 1892
1st (new order)[1]	3	Mar. 9, 1893	Sept. 26, 1895
2nd	3	Feb. 13, 1896	Jan. 28, 1899
3rd	4	Mar. 23, 1899	Feb. 5, 1903
4th	5	Mar. 26, 1903	Jan. 23, 1908
5th	5	April 30, 1908	May 25, 1912
6th	4	Feb. 13, 1913	Jan. 20, 1917
7th	4	May 10, 1917	Sept. 16, 1920
8th	–	Mar. 17, 1921	—

[1] Since the abolition of the Legislative Council of New Brunswick in 1892, the legislatures of that province have been officially re-numbered.

MINISTRIES.

Ministry.	Premier.	Date of Formation.
1	Hon. A. R. Wetmore	1867
2	Hon. G. E. King	1872
3	Hon. J. J. Fraser	1878
4	Hon. D. L. Hannington	1882
5	Hon. A. G. Blair	1883
6	Hon. Jas. Mitchell	July —, 1896
7	Hon. H. R. Emmerson	Oct. —, 1897
8	Hon. L. J. Tweedie	Aug. 31, 1900
9	Hon. Wm. Pugsley	Mar. 6, 1907
10	Hon. C. W. Robinson	May 31, 1907
11	Hon. J. D. Hazen	Mar. 24, 1908
12	Hon. James K. Flemming	Oct. 16, 1911
13	Hon. George J. Clarke	Dec. 17, 1914
14	Hon. James A. Murray	Feb. 1, 1917
15	Hon. Walter E. Foster	April 4, 1917
16	Hon. P. J. Veniot	Jan. 25, 1923

10.—Lieutenant-Governors, Legislatures and Ministries of Provinces, 1867-1923—con.

THE VENIOT (PRESENT) MINISTRY.

Office.	Name.	Date of Appointment.
Premier and Minister of Public Works	Hon. P. J. Veniot	Jan. 25, 1923
President of Council	Hon. Fred Magee	Oct. 1, 1920
Attorney General	Hon. James P. Byrne	April 4, 1917
Provincial Secretary-Treasurer	Hon. Judson E. Hetherington	Dec. 2, 1920
Minister of Lands and Mines	Hon. C. W. Robinson	Oct. 1, 1920
Minister of Agriculture	Hon. D. W. Mersereau	Dec. 2, 1920
Minister of Health	Hon. W. F. Roberts	April 4, 1917
Minister without Portfolio	Hon. J. E. Michaud	Jan. 4, 1921

QUEBEC.

LIEUTENANT-GOVERNORS.

Name.	Date of Appointment.	Name.	Date of Appointment.
Sir N. F. Belleau	July 1, 1867	L. A. Jetté	Feb. 2, 1898
Sir N. F. Belleau	[1]Jan. 31, 1868	L. A. Jetté	[1]Feb. 2, 1903
Réné Edouard Caron	Feb. 11, 1873	Sir Charles A. P. Pelletier	Sept. 4, 1908
Luc Letellier de St. Just	Dec. 15, 1876	Sir François Langelier	May 5, 1911
Theodore Robitaille	July 26, 1879	Sir Pierre E. Leblanc	Feb. 9, 1915
L. F. R. Masson	Nov. 7, 1884	Right Hon. Sir Charles Fitzpatrick	Oct. 21, 1918
A. R. Angers	Oct. 24, 1887	Hon. L. P. Brodeur	Oct. 31, 1923
Sir J. A. Chapleau	Dec. 5, 1892		

[1]Second term.

LEGISLATURES.

Legislature.	Number of Sessions.	Date of First Opening.	Date of Dissolution.
1st	4	Dec. 27, 1867	May 27, 1871
2nd	4	Nov. 7, 1871	June 7, 1875
3rd	3	Nov. 4, 1875	Mar. 22, 1878
4th	4	June 4, 1878	Nov. 7, 1881
5th	5	Mar. 8, 1882	Sept. 9, 1886
6th	4	Jan. 27, 1887	May 10, 1890
7th	1	Nov. 4, 1890	Dec. 22, 1891
8th	6	April 26, 1892	Mar. 6, 1897
9th	3	Nov. 23, 1897	Nov. 14, 1900
10th	4	Feb. 14, 1901	Nov. 4, 1904
11th	4	Mar. 2, 1905	May 6, 1908
12th	4	Mar. 2, 1909	April 15, 1912
13th	4	Nov. 5, 1912	April 14, 1916
14th	3	Nov. 17, 1916	May 22, 1919
15th	4	Dec. 10, 1919	Jan. 10, 1923

MINISTRIES.

Ministry.	Premier.	Date of Formation.
1	Hon. P. J. Chauveau	July 15, 1867
2	Hon. G. Ouimet	Feb. 26, 1873
3	Hon. C. E. B. De Boucherville	Sept. 22, 1874
4	Hon. H. G. Joly	Mar. 8, 1876
5	Hon. J. A. Chapleau	Oct. 30, 1879
6	Hon. J. A. Mousseau	July 31, 1882
7	Hon. J. J. Ross	Jan. 23, 1884
8	Hon. L. O. Taillon	Jan. 25, 1887
9	Hon. H. Mercier	Jan. 27, 1887
10	Hon. C. E. B. De Boucherville	Dec. 21, 1891
11	Hon. L. O. Taillon	Dec. 16, 1892
12	Hon. E. J. Flynn	May 12, 1896
13	Hon. F. G. Marchand	May 26, 1897
14	Hon. S. N. Parent	Oct. 3, 1900
15	Hon. Sir L. Gouin	Mar. 23, 1905
16	Hon. Louis Alexandre Taschereau	July 8, 1920

10.—Lieutenant-Governors, Legislatures and Ministries of Provinces, 1867-1923—con.

THE TASCHEREAU (PRESENT) MINISTRY.

Office.	Name.	Date of Appointment.
Prime Minister and Attorney General	Hon. L. A. Taschereau	July 9, 1920
Minister of Agriculture	Hon. J. E. Caron	Nov. 18, 1909
Minister without Portfolio	Hon. N. Pérodeau	Mar. 14, 1910
Minister of Lands and Forests	Hon. H. Mercier	Aug. 25, 1919
Minister of Public Works and Labour	Hon. A. Galipeault	Aug. 25, 1919
Minister of Mines, Fisheries and Colonization	Hon. J. E. Perrault	Aug. 25, 1919
Provincial Secretary and Registrar	Hon. A. David	Aug. 25, 1919
Minister of Roads	Hon. J. L. Perron	Sept. 27, 1921
Minister without Portfolio	Hon. E. Moreau	Sept. 20, 1921
Provincial Treasurer and Minister of Municipal Affairs	Hon. J. Nicol	Nov. 23, 1921

ONTARIO.

LIEUTENANT-GOVERNORS.

Name.	Date of Appointment.	Name.	Date of Appointment.
Major-Gen. H. W. Stisted	July 1, 1867	Sir Oliver Mowat	Nov. 18, 1897
W. P. Howland	July 14, 1868	Sir William Mortimer Clark	April 20, 1903
John W. Crawford	Nov. 5, 1873	Sir John M. Gibson	Sept. 22, 1908
D. A. Macdonald	May 18, 1875	Lt.-Col. Sir John S. Hendrie	Sept. 26, 1914
John Beverly Robinson	June 30, 1880	Lionel H. Clark	Nov. 27, 1919
Sir Alexander Campbell	Feb. 8, 1887	Henry Cockshutt	Sept. 10, 1921
Sir George A. Kirkpatrick	May 30, 1892		

LEGISLATURES.

Legislature.	Number of Sessions.	Date of First Opening.	Date of Dissolution.
1st	4	Dec. 27, 1867	Feb. 25, 1871
2nd	4	Dec. 7, 1872	Dec. 23, 1874
3rd	4	Nov. 24, 1875	April 25, 1879
4th	4	Jan. 7, 1880	Feb. 1, 1883
5th	3	Jan. 23, 1884	Nov. 15, 1886
6th	4	Feb. 10, 1887	April 26, 1890
7th	4	Feb. 11, 1891	May 29, 1894
8th	4	Feb. 21, 1895	Jan. 28, 1898
9th	5	Aug. 3, 1898	April 19, 1902
10th	2	Mar. 10, 1903	Dec. 13, 1904
11th	4	Mar. 22, 1905	May 2, 1908
12th	3	Feb. 16, 1909	Nov. 13, 1911
13th	3	Feb. 7, 1912	May 26, 1914
14th	5	Feb. 16, 1915	Sept. 29, 1919
15th	4	Mar. 9, 1920	May 4, 1923

MINISTRIES.

Ministry.	Premier.	Date of Formation.
1	Hon. J. S. Macdonald	July 16, 1867
2	Hon. E. Blake	Dec. 30, 1871
3	Hon. O. Mowat	Oct. 25, 1872
4	Hon. A. S. Hardy	July 25, 1896
5	Hon. G. W. Ross	Oct. 21, 1899
6	Hon. Sir J. P. Whitney	Feb. 8, 1905
7	Hon. Sir William Howard Hearst	Oct. 2, 1914
8	Hon. Ernest Charles Drury	Nov. 14, 1919
9	Hon. George Howard Ferguson	July 16, 1923

10.—Lieutenant-Governors, Legislatures and Ministries of Provinces, 1867-1923—con.

THE FERGUSON (PRESENT) MINISTRY.

Office.	Name.	Date of Appointment.
Premier and Minister of Education	Hon. G. H. Ferguson	July 16, 1923
Attorney General	Hon. W. F. Nickle	July 16, 1923
Minister of Public Works and Highways	Hon. Geo. S. Henry	July 16, 1923
Provincial Treasurer	Hon. W. H. Price	July 16, 1923
Minister of Mines	Hon. Charles McCrae	July 16, 1923
Minister of Public Health and Labour	Hon. Dr. Forbes Godfrey	July 16, 1923
Minister of Agriculture	Hon. John S. Martin	July 16, 1923
Provincial Secretary	Hon. Lincoln Goldie	July 16, 1923
Minister of Lands and Forests	Hon. James W. Lyons	July 16, 1923
Minister without Portfolio	Hon. Sir Adam Beck	July 16, 1923
Minister without Portfolio	Hon. Thos. Crawford	July 16, 1923
Minister without Portfolio	Hon. Dr. Leeming Carr	July 16, 1923
Minister without Portfolio	Hon. J. R. Cooke	July 16, 1923

MANITOBA.

LIEUTENANT-GOVERNORS.

Name.	Date of Appointment.	Name.	Date of Appointment.
A. G. Archibald	May 20, 1870	J. C. Patterson	Sept. 2, 1895
Francis Goodschall Johnson	April 9, 1872	Sir D. H. McMillan	Oct. 16, 1900
Alexander Morris	Dec. 2, 1872	Sir D. H. McMillan[1]	May 11, 1906
Joseph Ed. Cauchon	Dec. 2, 1877	D. C. Cameron	Aug. 1, 1911
James C. Atkins	Sept. 22, 1882	Sir James A. M. Aikins	Aug. 3, 1916
J. C. Shultz	July 1, 1888	Sir James A. M. Aikins[1]	Aug. 7, 1921

[1] Second term.

LEGISLATURES.

Legislature.	Number of Sessions.	Date of First Opening.	Date of Dissolution.
1st	4	Mar. 15, 1871	Dec. 16, 1874
2nd	4	Mar. 31, 1875	Nov. 11, 1878
3rd	1	Feb. 1, 1879	Nov. 26, 1879
4th	4	Jan. 22, 1880	Nov. 13, 1882
5th	4	May 17, 1883	Nov. 11, 1886
6th	2	April 14, 1887	June 16, 1888
7th	5	Aug. 28, 1888	June 27, 1892
8th	3	Feb. 2, 1893	Dec. 11, 1895
9th	4	Feb. 6, 1896	Nov. 16, 1899
10th	4	Mar. 23, 1900	June 25, 1903
11th	4	Jan. 7, 1904	Feb. 28, 1907
12th	3	Jan. 2, 1908	June 20, 1910
13th	4	Feb. 9, 1911	June 15, 1914
14th	2	Sept. 18, 1914	July 16, 1915
15th	5	Jan. 6, 1916	Mar. 27, 1920
61th	2	Feb. 10, 1921	June 24, 1922
17th	–	Jan. 18, 1923	—

MINISTRIES.

Ministry.	Premier.	Date of Formation.
1	Hon. A. Boyd	Sept. 16, 1870
2	Hon. N. A. Girard	Dec. 14, 1871
3	Hon. H. J. H. Clarke	Mar. 14, 1872
4	Hon. N. A. Girard	July 8, 1874
5	Hon. R. A. Davis	Dec. 3, 1874
6	Hon. John Norquay	Oct. 16, 1878
7	Hon. D. H. Harrison	Dec. 26, 1887
8	Hon. T. Greenway	Jan. 19, 1888
9	Hon. H. J. Macdonald	Jan. 8, 1900
10	Hon. Sir R. P. Roblin	Oct. 29, 1900
11	Hon. T. C. Norris	May 12, 1915
12	Hon. John Bracken	Aug. 8, 1922

10.—Lieutenant-Governors, Legislatures and Ministries of Provinces, 1867-1923—con.

THE BRACKEN (PRESENT) MINISTRY.

Office.	Name.	Date of Appointment.
Prime Minister, Railway Commissioner and Provincial Lands Commissioner	Hon. John Bracken	Aug. 8, 1922
Provincial Treasurer, Minister of Telephones and Telegraphs	Hon. F. M. Black	Aug. 8, 1922
Attorney General	Hon. R. W. Craig	Aug. 8, 1922
Minister of Education	Hon. John Bracken	Aug. 8, 1922
Minister of Agriculture and Immigration	Hon. Neil Cameron	Aug. 8, 1922
Minister of Public Works	Hon. W. R. Clubb	Aug. 8, 1922
Provincial Secretary	Hon. D. L. McLeod	Aug. 8, 1922

SASKATCHEWAN.

LIEUTENANT-GOVERNORS.

Name.	Date of Appointment.	Name.	Date of Appointment.
A. E. Forget	Sept. 1, 1905	Sir Richard Stuart Lake	Oct. 6, 1915
Geo. W. Brown	Oct. 5, 1910	H. W. Newlands	Feb. 17, 1921

LEGISLATURES.

Legislature.	Number of Sessions.	Date of First Opening.	Date of Dissolution.
1st	3	Mar. 29, 1906	July 20, 1908
2nd	4	Dec. 10, 1908	June 15, 1912
3rd	6	Nov. 14, 1912	June 2, 1917
4th	4	Nov. 13, 1917	———, 1921
5th	–	Dec. 8, 1921	—

MINISTRIES.

Ministry.	Premier.	Date of Formation.
1	Hon. Walter Scott	Sept. 5, 1905
2	Hon. W. M. Martin	Oct. 20, 1916
3	Hon. C. A. Dunning	April 5, 1922

THE DUNNING (PRESENT) MINISTRY.

Office.	Name.	Date of Appointment
Premier, President of Council, Provincial Treasurer, Minister of Railways	Hon. C. A. Dunning	Oct. 20, 1916
Minister of Public Works and Minister of Telephones	Hon. A. P. McNab	Dec. 10, 1908
Minister of Education, and Minister in charge of Bureau of Publications and King's Printer's Office	Hon. S. J. Latta	Oct. 20, 1917
Minister of Agriculture, and Minister of Municipal Affairs	Hon. C. M. Hamilton	April 27, 1920
Minister of Highways, and Minister in charge of Bureau of Labour and Industries	Hon. J. G. Gardiner	April 5, 1922
Attorney General, and Minister in charge of Bureau of Child Protection	Hon. J. A. Cross	April 5, 1922
Provincial Secretary, and Minister of Public Health	Hon. J. M. Uhrich	April 5, 1922

10.—Lieutenant-Governors, Legislatures and Ministries of Provinces, 1867-1923—con.

ALBERTA.

LIEUTENANT-GOVERNORS.

Name.	Date of Appointment.	Name.	Date of Appointment.
George H. V. Bulyea	Sept. 1, 1905	Robert George Brett	Oct. 6, 1915
George H. V. Bulyea	[1]Oct. 5, 1910	Robert George Brett	[1]Oct. 20, 1920

[1]Second term.

LEGISLATURES.

Legislature.	Number of Sessions.	Date of First Opening.	Date of Dissolution.
1st	4	Mar. 15, 1906	———, 1909
2nd	4	Feb. 10, 1910	Mar. 25, 1913
3rd	5	Sept. 16, 1913	May 14, 1917
4th	4	Feb. 7, 1918	June 23, 1921
5th	–	Feb. 2, 1922	—

MINISTRIES.

Ministry.	Premier.	Date of Formation.
1	Hon. Alex. Rutherford	Sept. 2, 1905
2	Hon. A. L. Sifton	May 26, 1910
3	Hon. Charles Stewart	Oct. 30, 1917
4	Hon. Herbert Greenfield	Aug. 13, 1921

THE GREENFIELD (PRESENT) MINISTRY.

Office.	Name.	Date of Appointment.
Premier, Provincial Treasurer and Provincial Secretary	Hon. Herbert Greenfield	Aug. 13, 1921
Attorney General	Hon. J. E. Brownlee	Aug. 13, 1921
Minister of Public Works	Hon. A. Ross	Aug. 13, 1921
Minister of Agriculture	Hon. George Hoadley	Aug. 13, 1921
Minister of Education	Hon. P. E. Baker	Aug. 13, 1921
Minister of Railways and Telephones	Hon. V. W. Smith	Aug. 13, 1921
Minister of Municipal Affairs and Minister of Health	Hon. R. G. Reid	Aug. 13, 1921
Minister without Portfolio	Hon. Mrs. Walter Parlby	Aug. 13, 1921

BRITISH COLUMBIA.

LIEUTENANT-GOVERNORS.

Name.	Date of Appointment.	Name.	Date of Appointment.
J. W. Trutch	June 5, 1871	Sir Henri G. Joly de Lotbinière	June 21, 1900
Albert Norton Richards	June 27, 1876	James Dunsmuir	May 11, 1906
Clement F. Cornwall	June 21, 1881	T. W. Patterson	Dec. 3, 1909
Hugh Nelson	Feb. 7, 1887	Sir Frank S. Barnard	Dec. 5, 1914
Edgar Dewdney	Nov. 1, 1892	Col. Edward G. Prior	Dec. 9, 1919
Thomas R. McInnes	Nov. 18, 1897	Walter C. Nichol	Dec. 24, 1920

10.—Lieutenant-Governors, Legislatures and Ministries of Provinces, 1867-1923—con.

LEGISLATURES.

Legislature.	Number of Sessions.	Date of First Opening.	Date of Dissolution.
1st	4	Feb. 16, 1872	Aug. 30, 1875
2nd	3	Jan. 10, 1876	April 12, 1887
3rd	5	July 29, 1878	June 13, 1882
4th	4	Jan. 25, 1883	June 3, 1886
5th	4	Jan. 24, 1887	May 10, 1890
6th	4	Ja . 15, 1891	June 5, 1894
7th	4	Nov. 12, 1894	June 7, 1898
8th	2	Jan. 5, 1899	April 10, 1900
9th	4	July 19, 1900	June 16, 1902
10th	3	Nov. 26, 1903	Dec. 24, 1906
11th	3	Mar. 7, 1907	Oct. 20, 1909
12th	3	Jan. 20, 1920	Feb. 27, 1912
13th	4	Jan. 16, 1913	June 1, 1916
14th	4	Mar. 1, 1917	Oct. 23, 1920
15th	–	Feb. 28, 1921	—

MINISTRIES.

Ministry.	Premier.	Date of Formation.
1	Hon. J. F. McCreight	Dec. —, 1871
2	Hon. A. De Cosmos	Dec. 23, 1872
3	Hon. G. A. Walkem	Feb. 11, 1874
4	Hon. A. C. Elliot	Feb. 1, 1876
5	Hon. J. Walkem	June 26, 1878
6	Hon. R. Beaven	June 13, 1882
7	Hon. W. Smythe	Jan. 28, 1883
8	Hon. A. E. B. Davie	April 1, 1887
9	Hon. J. Robson	Aug. 3, 1889
10	Hon. T. Davie	July 2, 1892
11	Hon. J. H. Turner	Mar. 4, 1895
12	Hon. C. A. Semlin	Aug. 12, 1898
13	Hon. Jos. Martin	Mar. 1, 1900
14	Hon. J. Dunsmuir	June 15, 1900
15	Hon. E. G. Prior	Nov. 21, 1902
16	Hon. R. McBride	June 1, 1903
17	Hon. Wm. J. Bowser	Dec. 15, 1915
18	Hon. Harlan Carey Brewster	Nov. 19, 1916
19	Hon. John Oliver	Mar. 6, 1918

THE OLIVER (PRESENT) MINISTRY.

Office.	Name.	Date of Appointment.
Premier, and President of the Council	Hon. John Oliver	Mar. 6, 1918
Provincial Secretary, Minister of Education and Minister of Railways	Hon. J. D. Maclean	Mar. 6, 1918
Attorney General and Minister of Labor	Hon. A. M. Manson	Jan. 28, 1922
Minister of Lands	Hon. T. D. Pattullo	Mar. 6, 1918
Minister of Finance and Minister of Industries	Hon. John Hart	Mar. 6, 1918
Minister of Agriculture	Hon. E. D. Barrow	Mar. 6, 1918
Minister of Mines and Commissioner of Fisheries	Hon. William Sloan	Mar. 6, 1918
Minister of Public Works	Hon. W. H. Sutherland	Jan. 28, 1922

THE TERRITORIES.

LIEUTENANT-GOVERNORS.

Name.	Date of Appointment.	Name.	Date of Appointment
A. G. Archibald	May 10, 1870	Joseph Royal	July 1, 1888
Francis Goodschall Johnson	April 9, 1872	C. H. Mackintosh	Oct. 31, 1893
Alexander Morris	Dec. 2, 1872	M. C. Cameron	May 30, 1898
David Laird	Oct. 7, 1876	A. E. Forget	Oct. 11, 1898
Edgar Dewdney	Dec. 3, 1881	A. E. Forget[1]	Mar. 30, 1904

[1] Second term.

10.—Lieutenant-Governors, Legislatures and Ministries of Provinces, 1867-1923—concluded.

LEGISLATURES.

Legislature.	Number of Sessions.	Date of First Opening.	Date of Dissolution.
1st	3	Oct. 31, 1888	By effluxion of time.
2nd	5	Dec. 10, 1891	Oct. 1, 1894
3rd	4	Aug. 29, 1895	Oct. 13, 1898
4th	4	April 4, 1899	April 26, 1902
5th	13	April 16, 1903	Aug. 31, 1905

NOTE.—In 1888 the districts of Alberta, Assiniboia, Athabaska and Saskatchewan, called the Northwest Territories, with their capital at Regina, were given local responsible government, and the old Northwest Council was replaced by the Northwest Legislature, which existed until Aug. 31, 1905. When the area approximately comprised within their limits was formed into the provinces of Alberta and Saskatchewan in 1905, and these provinces were given systems of government similar to the other provinces of the Dominion. The remaining areas (the Yukon Territory and the provisional districts of Franklin, Keewatin and Mackenzie) are now administered by the Northwest Territories Branch of the Department of the Interior.

III.—THE CANADIAN HIGH COMMISSIONER AND THE PROVINCIAL AGENTS-GENERAL.

The policy of the early North American colonies, in maintaining in London accredited representatives for business and diplomatic purposes, was recognized in the eighteenth century as being a more satisfactory means of communication with the home government than that provided by occasional official visits or by correspondence. Edmund Burke, the noted British statesman, held the position of agent of the colony of New York for some years following 1771. Of the Canadian colonies, Nova Scotia was the first to adopt the plan, its legislature having appointed an agent in London in 1761. New Brunswick was similarly represented in 1786, Upper Canada as early as 1794, Lower Canada in 1812 and British Columbia in 1857. For some years after 1845 several of the colonies were represented in London by Crown Agents, appointed by the Secretary of State and paid by the colonies themselves. This system, however, was of but short duration.

With the federation of the provinces in 1867, a new political entity was brought into existence, which could not avail itself of the services of the provincial agents. To overcome the inadequacy of the methods of communication between the Canadian and Imperial governments (carried on at that time by correspondence between the Governor-General and the Secretary of State) the position of Canadian High Commissioner was created in 1879 (See R.S.C., 1906, c. 15). This official is the representative of the Canadian Government in London, appointed by the Canadian Government and clothed with specific powers as a medium through which constant and confidential communications pass between the Governments of Great Britain and of Canada.

Sir Alexander Galt was the first Canadian High Commissioner, holding office from November, 1879, until May, 1883, when he was succeeded by Sir Charles Tupper. Lord Strathcona and Mount Royal was appointed in 1896, Sir George Perley in 1914, and the present incumbent, Hon. P. C. Larkin, in February, 1922.

Agents-General.—The older provinces of Nova Scotia, New Brunswick, Quebec, Ontario and British Columbia still adhere to the practice of former days and are represented in London by Agents-General. These officials are appointed by the legislatures of the provinces under general authority given in the British North America Act and act for their Governments in capacities very similar to that of the High Commissioner, with the exception, perhaps, that their duties have tended to become of a business rather than a diplomatic nature.

VI.—POPULATION.

I.—GROWTH AND DISTRIBUTION OF POPULATION.

1.—Census Statistics of General Population.

Since the creation of the Dominion of Canada in 1867, decennial censuses have been taken on the *de jure* plan as of the dates April 2, 1871, April 4, 1881, April 5, 1891, April 1, 1901, June 1, 1911 and June 1, 1921. The population of Canada and its percentage distribution as on these dates, together with the absolute and percentage increases from decade to decade, is given in Tables 1 to 4 immediately following.

1.—Population of Canada by Provinces and Territories in the Census years 1871 to 1921.[1]

Province or Territory.	1871.	1881.	1891.	1901.	1911.	1921.
Prince Edward Island	94,021	108,891	109,078	103,259	93,728	88,615
Nova Scotia	387,800	440,572	450,396	459,574	492,338	523,837
New Brunswick	285,594	321,233	321,263	331,120	351,889	387,876
Quebec	1,191,516	1,359,027	1,488,535	1,648,898	2,005,776[2]	2,361,199
Ontario	1,620,851	1,926,922	2,114,321	2,182,947	2,527,292[2]	2,933,662
Manitoba	25,228	62,260	152,506	255,211	461,394[2]	610,118
Saskatchewan	–	–	–	91,279	492,432	757,510
Alberta	–	–	–	73,022	374,295[3]	588,454
British Columbia	36,247	49,459	98,173	178,657	392,480	524,582
Yukon Territory	–	–	–	27,219	8,512	4,157
Northwest Territories[4]	48,000	56,446	98,967	20,129	6,507[2]	7,988
Royal Canadian Navy	–	–	–	–	–	485
Total	**3,689,257**	**4,324,810**	**4,833,239**	**5,371,315**	**7,206,643**	**8,788,483**

2.—Percentage Distribution of Canadian Population by Provinces and Territories, 1871 to 1921.

Province or Territory.	1871.	1881.	1891.	1901.	1911.	1921.
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Prince Edward Island	2·55	2·52	2·25	1·92	1·30	1·01
Nova Scotia	10·51	10·19	9·32	8·56	6·83	5·96
New Brunswick	7·74	7·43	6·65	6·16	4·88	4·41
Quebec	32·30	31·42	30·80	30·70	27·83	26·87
Ontario	43·94	44·56	43·74	40·64	35·07	33·38
Manitoba	0·68	1·44	3·16	4·75	6·40	6·94
Saskatchewan	–	–	–	1·70	6·84	8·62
Alberta	–	–	–	1·36	5·19	6·70
British Columbia	0·98	1·14	2·03	3·33	5·45	5·97
Yukon Territory	–	–	–	0·51	0·12	0·05
Northwest Territories[4]	1·30	1·30	2·05	0·37	0·09	0·09
Royal Canadian Navy	–	–	–	–	–	–
	100·00	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**

[1] The population of the Prairie Provinces, according to the quinquennial census of 1916, is given on page 177. [2] As corrected as a result of the Extension of Boundaries Act, 1912. [3] As corrected by transfer of population of Fort Smith (368) to Northwest Territories. [4] The decrease shown in the population of the Northwest Territories after 1891 is due to the separation therefrom of vast areas to form Alberta, Saskatchewan and the Yukon Territory, and to extend the boundaries of Quebec, Ontario and Manitoba.

3.—Population of Canada by Provinces and Territories in 1871 and 1921, and numerical increase in each decade from 1871 to 1921.

Province or Territory.	Population in 1871.	Increase in each decade from 1871 to 1921.					Population in 1921.	Increase 1871 to 1921.
		1871 to 1881.	1881 to 1891.	1891 to 1901.	1901 to 1911.	1911 to 1921.		
Prince Edward I..	94,021	14,870	187	−5,819	−9,531	−5,113	88,615	−5,406
Nova Scotia.....	387,800	52,772	9,824	9,178	32,764	31,499	523,837	136,037
New Brunswick...	285,594	35,639	30	9,857	20,769	35,987	387,876	102,282
Quebec.....	1,191,516	167,511	129,508	160,363	356,878	355,423	2,361,199	1,169,683
Ontario.....	1,620,851	306,071	187,399	68,626	344,345	406,370	2,933,662	1,312,811
Manitoba.....	25,228	37,032	90,246	102,705	206,183	148,724	610,118	584,890
Saskatchewan.....	–	–	–	91,279	401,153	265,078	757,510	757,510
Alberta.....	–	–	–	73,022	301,273	214,159	588,454	588,454
British Columbia..	36,247	13,212	48,714	80,484	213,823	132,102	524,582	488,335
Yukon Territory..	–	–	–	27,219	−18,707	−4,355	4,157	4,157
Northwest Territories [1]	48,000	8,446	42,521	−78,838	−13,622	1,481	7,988	−40,012
Royal Canadian Navy.....	–	–	–	–	–	485	485	485
Canada.....	**3,689,257**	**635,553**	**508,429**	**538,076**	**1,835,328**	**1,581,840**	**8,788,483**	**5,099,226**

4.—Population of Canada by Provinces and Territories in 1871, and increase per cent by decades from 1871 to 1921.

Province or Territory.	Population in 1871.	Per cent increase by decades from 1871 to 1921.					Per cent increase in 50 years.
		1871 to 1881.	1881 to 1891.	1891 to 1901.	1901 to 1911.	1911 to 1921.	
Prince Edward Island.....	94,021	15·82	0·17	−5·33	−9·23	−5·46	−5·75
Nova Scotia.....	387,800	13·61	2·23	2·04	7·13	6·40	35·08
New Brunswick.....	285,594	12·48	0·01	3·07	6·27	10·23	35·82
Quebec.....	1,191,516	14·06	9·53	10·77	21·64	17·72	98·17
Ontario.....	1,620,851	18·88	9·73	3·25	15·77	16·08	80·99
Manitoba.....	25,228	146·79	144·95	67·34	80·79	32·23	2,318·42
Saskatchewan.....	–	–	–	–	439·48	53·83	–
Alberta.....	–	–	–	–	412·58	57·22	–
British Columbia.....	36,247	36·45	98·49	81·98	119·68	33·66	1,347·24
Yukon Territory.....	–	–	–	–	−68·73	−51·16	–
Northwest Territories[1].....	48,000	17·60	75·33	79·66	−67·67	22·76	−83·36
Canada.....	**3,689,257**	**17·23**	**11·76**	**11·13**	**34·17**	**21·95**	**138·22**

Early Censuses.—The credit of taking the first census of modern times belongs to Canada. The year was 1665, the census that of the colony of New France. Still earlier records of settlement at Port Royal (1605) and Quebec (1608) are extant; but the census of 1665 was a systematic "nominal" enumeration of the people, taken on the *de jure* principle, on a fixed date, showing age, sex, occupation, and conjugal and family condition. A supplementary enquiry in 1667 included the areas under cultivation and the numbers of sheep and cattle. When it is recalled that in Europe the first census dates only from the eighteenth century (those of France and England from the first year of the nineteenth), and that in the United States as well the census begins only with 1790, the achievement of the primitive St. Lawrence colony in instituting what is today one of the principal instruments of government may call for more than passing appreciation.

[1] The decreases shown in the population of the Northwest Territories since 1891 are due to the separation therefrom of immense areas to form the provinces of Alberta and Saskatchewan and the Yukon Territory, as well as to extend the boundaries of the older provinces of Quebec, Ontario and Manitoba.

The census of 1665 (the results of which occupy 154 pages in manuscript, still to be seen in the Archives at Paris, with a transcript at Ottawa) showed some 3,215 souls. It was repeated at intervals more or less regularly for a hundred years. By 1685 the total had risen to 12,263, including 1,538 Indians collected in villages. By the end of the century it had passed 15,000, and this was doubled in the next twenty-five years. Not to present further details, it may be said that at the time of the cession (1763) the population of New France was about 70,000, whilst another 10,000 French (thinned to these proportions by the expulsion of the Acadians) were scattered through what is now Nova Scotia, New Brunswick and Prince Edward Island. The British population of Nova Scotia was at this time about 9,000.

After the cession, our chief reliance for statistics must be laid for half a century and more upon the reports of colonial governors—more or less sporadic—though censuses of the different sections under British rule were taken at irregular intervals. British settlement on a substantial scale in the Gulf Provinces and in Ontario dates only from the Loyalist movement which followed the American Revolution, at the end of which, *i.e.*, about the year of the Constitutional Act (1791), the population of Lower Canada was approximately 163,000, whilst the newly constituted Province of Upper Canada under Lieutenant-Governor Simcoe numbered perhaps 15,000, and the addition of the Maritime colonies brought the total well over 200,000. A decade later Canada began the nineteenth century with a population of probably not less than 250,000 or 260,000. Subsequent censuses gave the population of the different colonies as follows:—Upper Canada (1824) 150,069, (1840) 432,159; Lower Canada (1822) 427,465, (1844) 697,084; New Brunswick (1824) 74,176, (1840) 156,162; Nova Scotia (1817) 81,351, (1838) 202,575; Prince Edward Island (1822) 24,600, (1841) 47,042.

The policy of desultory census-taking was ended in 1847 by an Act of the Canadian Legislature creating a "Board of Registration and Statistics," with instructions "to collect statistics and adopt measures for disseminating or publishing the same," and providing also for a decennial census. The first census thereunder was taken in 1851, and as similar censuses were taken by New Brunswick and Nova Scotia in the same year, we have a regular measure of population growth in Canada over the past seventy years. The fifties saw a very rapid development, especially in Ontario, whilst the sixties showed only less substantial gains. In the years following Confederation, again, there was a spurt, the increase between 1871 and 1881 (which included several lean years towards the end) being 635,553, or 17·23 p.c. In neither of the two decades next following, however, was this record equalled, either absolutely or relatively, the gains in each being under 550,000, or 12 p.c. With the end of the century the population of Canada had reached approximately five and a quarter millions, or twenty times that of 1800.

Twentieth Century Expansion.—It is within the confines of the present century that the most spectacular expansion of the Canadian population has taken place. The outstanding feature was, of course, the opening to settlement of the "last best West." The unorganized territories of British North America had been ceded to the Dominion soon after Confederation, and the West had been tapped and traversed by the Canadian Pacific Railway in the eighties and nineties. But though western population doubled with each of these decades, it was only with the launching of a large-scale immigration movement after 1900 that western settlement and production became a first-rate economic factor. Simultaneously an almost equally striking development occurred in the industrial centres of Eastern Canada, which formed the immediate basis for the move upon the West. At the back, of course,

was the heavy inflow of British capital—a total of two and a half billions of dollars within a dozen years—which went to finance the large constructive undertakings (chiefly railway and municipal) which characterized the movement and which represented at bottom the traditional policy of England in search of cheap and abundant food for her workshop population. The years 1901 to 1911, in brief, form the *decas mirabilis* of Canadian expansion. The immigration movement just mentioned, which had previously run well under 50,000 per annum, rose rapidly to over five times that volume, eventually passing 400,000 in a single year. In the ten years 1901 to 1911 it totalled over 1,800,000, and though at least a third of these were lost (partly in the return to Europe of labour temporarily attracted by the railway and other developments in progress, and partly in the never-ceasing and natural "drag" of the United States upon a virile and less wealthy people), it formed the chief factor in the gain of 34 p.c. which the total population of Canada registered in that decade, and which was larger than the relative growth of any other country during the same period. The movement was continued and even intensified in the first three years of the second decade of the century, after which a recession set in to which the outbreak of the war gave a new and wholly unexpected turn. Nevertheless the decade which closed with the census of 1921 again showed over 1,800,000 immigrant arrivals in Canada, and though the proportionate loss of these was very heavy (probably as much as two-thirds), Canada's relative gain for the decade was again among the largest in the world.

The Census of 1921.—According to the final results of the 1921 census, the total population of the Dominion on June 1, 1921, was 8,788,483, as compared with 7,206,643 on June 1, 1911, an increase of 1,581,840 or 21·95 p.c. in the decade, as compared with 34·17 p.c. during the decade from 1901 to 1911. Reduced as is the rate of increase during the past ten years, it is higher than the rate of increase in any other of the principal countries of the British Empire except Australia, where the rate was only slightly greater, and considerably higher than that of the United States.

The countries which comprise the British Empire, as also the United States, have on the whole suffered much less in actual loss of life from the war and its consequences than have the continental countries of Europe. None of them has actually declined in population during the period, as many continental European countries have done. Their percentage increases, however, have in almost all cases been lower than in the previous decade. Thus the population of England and Wales increased between 1911 and 1921 only from 36,070,492 to 37,885,242, or 4·93 p.c., as compared with an increase of 10·89 p.c. in the previous decade; Scotland, again, increased only from 4,760,904 to 4,882,288, or 2·5 p.c., as compared with 6·5 p.c. between 1901 and 1911.

Of the oversea Dominions, New Zealand increased from 1,008,468 to 1,218,270 or 20·8 p.c., as compared with 30·5 p.c., while the white population of South Africa increased from 1,276,242 to 1,522,442 or 19·3 p.c. On the other hand, the Commonwealth of Australia, the only Dominion to grow more rapidly in the second decade of the twentieth century than in the first, increased from 4,455,005 in 1911 to 5,436,794 in 1921, or 22·04 p.c., as compared with 18·05 p.c. The population of the continental United States increased between 1910 and 1920 from 91,972,266 to 105,710,620, an increase of 14·9 p.c. as compared with 21 p.c. in the preceding decade.

Considering now the Dominion of Canada itself, it becomes evident from Tables 1 and 2 that in this country, as formerly in the United States, there is a

distinct movement of population from East to West. In the decade from 1911 to 1921, there occurred in the four western provinces an increase of population from 1,720,601 to 2,480,664 or 44·2 p.c., while the five eastern provinces increased from 5,471,023 to 6,295,189, an increase of 824,166 persons, which, though absolutely larger than the figure for the West, constitutes an increase of only 15 p.c. over the 1911 population. The same conclusion may be deduced from Table 2, which shows that while in 1871 only 2·96 p.c. and in 1881 only 3·88 p.c. of the population of the country dwelt west of the lake of the Woods, the percentage in 1891 was 7·24, in 1901, 12·02, in 1911, 24·09 and in 1921, 28·37 p.c. On the other hand, the three easternmost Maritime provinces, which 1871 contained 20·80 p.c. of the population of the Dominion, had in 1881, 20·14 p.c., in 1891, 18·22 p.c., in 1901, 16·64 p.c., in 1911, 13·01 p.c., and in 1921 only 11·38 p.c. of the population. Ontario and Quebec—the old pre-Confederation Province of Canada—still remain the chief centre of population, their population being in 1921 60·25 p.c. of the total as compared with 76·24 p.c. in 1871, 75·98 p.c. in 1881, 74·54 p.c. in 1891, 71·34 p.c. in 1901, and 62·90 p.c. in 1911. In other words, the net result of the half century has been that in 1921 only three-fifths of the population of the Dominion lived in these provinces as compared with more than three-fourths in 1871.

In 1881 the "centre" of population east and west was in the county of Prescott, Ontario, not far from Caledonia village. In 1891 it had moved west to the vicinity of Ottawa, where it remained in 1901. In 1911 the county of Victoria, Ontario, contained the centre, and it is probably in Simcoe county, Ontario, at the present time.

The populations of the several provinces and electoral districts of Canada in 1921 are given by sex in Table 5.

5.—Area and Population of Canada by Provinces and Electoral Districts, 1921, 1911 and 1901.

Provinces and Districts.	Land area in sq. miles.	Population, 1921.				1911.	1901.
		Males.	Females.	Total.	Per sq. mile.		
Canada	**3,603,909.00**[1]	**4,529,945**	**4,258,538**	**8,788,483**	**2·44**	**7,206,643**	**5,371,315**
Prince Edward Island	**2,184·36**[1]	**44,887**	**43,728**	**88,615**	**40·56**	**93,728**	**103,259**
Kings	641·18	10,570	9,875	20,445	31·88	22,636	24,725
Prince	778·23	16,026	15,494	31,520	40·50	32,779	35,400
Queens	764·95	18,291	18,359	36,650	47·91	38,313	43,134
Nova Scotia	**21,068·00**[1]	**266,472**	**257,365**	**523,837**	**24·86**	**492,338**	**459,574**
Antigonish and Guysborough	2,212·00	13,988	13,110	27,098	12·25	29,010	31,937
Cape Breton North and Victoria	1,355·10	16,031	15,294	31,325	23·11	29,888	24,650
Cape Breton South and Richmond	1,210·90	39,759	36,603	76,362	63·06	66,625	48,602
Colchester	1,451·00	12,647	12,549	25,196	17·36	23,664	24,900
Cumberland	1,683·00	21,072	20,119	41,191	24·47	40,543	36,168
Digby and Annapolis	1,983·65	14,633	14,332	28,965	14·60	29,871	30,579
Halifax City and County	2,123·38	48,455	48,773	97,228	45·78	80,257	74,662
Hants	1,229·00	10,165	9,574	19,739	16·06	19,703	20,056
Inverness	1,408·75	12,421	11,387	23,808	16·90	25,571	24,353
Kings	864·00	12,045	11,678	23,723	27·45	21,780	21,937
Lunenburg	1,202·00	17,295	16,447	33,742	28·07	33,260	32,389
Pictou	1,124·00	20,537	20,314	40,851	36·34	35,858	33,459
Shelburne and Queens	2,022·48	11,913	11,522	23,435	11·58	24,211	24,428
Yarmouth and Clare	1,198·99	15,511	15,663	31,174	26·00	32,097	31,454

NOTE.—The land areas here given for the provinces and electoral districts are as measured by a planimeter on the map, and include the areas of small lakes and other waters which have not been measured.

[1] By map measurement.

5.—Area and Population of Canada by Provinces and Electoral Districts, 1921, 1911 and 1901—continued.

Provinces and Districts.	Land area in sq. miles.	Population, 1921.				1911.	1901.
		Males.	Females.	Total.	Per sq. mile.		
New Brunswick	**27,911·00**[1]	**197,351**	**190,525**	**387,876**	**13·90**	**351,889**	**331,120**
Charlotte	1,283·40	10,853	10,582	21,435	16·70	21,147	22,415
Gloucester	1,869·81	19,697	18,987	38,684	20·68	32,662	27,936
Kent	1,778·02	12,317	11,599	23,916	13·45	24,376	23,958
Northumberland	4,740·60	17,354	16,631	33,985	7·16	31,194	28,543
Restigouche and Madawaska	4,542·56	22,258	20,719	42,977	9·46	32,365	22,897
Royal	2,855·53	16,698	15,380	32,078	11·23	31,491	32,832
St. John City, County and Albert	1,302·88	33,754	35,339	69,093	53·03	63,263	62,684
Victoria and Carleton	3,402·64	17,706	16,194	33,900	9·96	32,990	30,446
Westmorland	1,442·18	26,959	26,428	53,387	37·02	44,621	42,060
York and Sunbury	4,693·74	19,755	18,666	38,421	8·18	37,780	37,349
Quebec	**690,865·00**[1]	1,180,028	1,181,171	**2,361,199**	**3·42**	**2,005,776**	**1,648,898**
Argenteuil	783·36	9,085	8,080	17,165	21·91	16,766	16,407
Bagot	346·14	9,003	9,032	18,035	52·10	18,206	18,181
Beauce	1,891·04	27,320	26,521	53,841	28·47	51,399	43,129
Beauharnois	147·03	9,805	10,083	19,888	135·26	20,802	21,732
Bellechasse	652·64	10,665	10,525	21,190	32·47	21,141	18,706
Berthier	2,192·74	9·927	9,890	19,817	9·04	19,872	19,980
Bonaventure	3,463·61	14,879	14,213	29,092	8·40	28,110	24,495
Brome	488·15	7,024	6,447	13,471	27·60	13,216	13,397
Chambly and Verchères	337·00	17,285	17,358	34,643	102·80	28,715	24,318
Champlain	1,497·95	24,760	23,249	48,009	32·05	39,824	32,015
Charlevoix-Montmorency	4,303·09	14,642	14,232	28,874	6·71	27,972	25,813
Châteauguay-Huntingdon	626·52	13,582	13,149	26,731	42·67	26,562	27,562
Chicoutimi-Saguenay	492,140·74[2]	47,182	43,427	90,609	0·18	65,888	48,291
Compton	1,439·04	16,945	15,340	32,285	22·44	29,630	26,460
Dorchester	941·60	15,038	13,916	28,954	30·75	25,096	21,007
Drummond & Arthabaska	1,197·82	22,816	22,007	44,823	37·42	41,590	38,999
Gaspé	4,551·47	20,945	19,430	40,375	8·87	35,001	30,683
George-Etienne Cartier	–	26,746	28,054	54,800	–	51,937	53,673
Hochelaga	–	35,828	37,698	73,526	–	44,884	14,193
Hull	1,023·18	22,020	21,521	43,541	42·55	37,917	33,851
Jacques Cartier	86·94	44,178	45,119	89,297	1,027·11	56,855	21,966
Joliette	3,013·50	12,700	13,213	25,913	8·60	23,911	22,255
Kamouraska	1,037·50	11,137	10,877	22,014	21·22	20,888	19,099
Labelle	2,948·80	18,931	16,996	35,927	12·18	30,115	22,291
Laprairie and Napierville	319·20	10,352	9,713	20,065	62·86	19,335	19,633
L'Assomption-Montcalm	4,448·40	14,225	14,093	28,318	6·37	28,506	26,996
Laurier-Outremont	–	34,201	37,846	72,047	–	44,264	13,237
Laval-Two Mountains	378·12	14,459	13,855	28,314	74·88	25,275	24,685
Lévis	271·83	16,523	16,800	33,323	122·59	28,913	26,210
L'Islet	772·80	9,097	8,762	17,859	23·11	16,435	14,439
Lotbinière	726·40	10,992	10,845	21,837	30·06	22,158	20,039
Maisonneuve	58·10	32,298	32,635	64,933	1,117·61	33,796	12,402
Maskinongé	2,940·00	8,609	8,336	16,945	5·76	16,509	15,813
Matane	3,495·67	18,795	17,508	36,303	10·39	27,539	18,521
Mégantic	780·16	17,161	16,472	33,633	43·11	31,314	23,878
Missisquoi	375·21	8,837	8,822	17,709	47·20	17,466	17,339
Montmagny	630·13	11,341	10,656	21,997	34·91	17,356	14,757
Nicolet	626·07	14,841	14,854	29,695	47·43	30,055	27,209
Pontiac	126,437·19[3]	25,169	21,032	46,201	0·36	31,479	28,127
Portneuf	6,722·91	17,350	17,102	34,452	5·12	30,260	24,176
Quebec County	2,799·59	15,234	15,896	31,130	11·12	28,046	24,381
Quebec East	2·20	17,836	20,494	38,330	17,422·73	30,922	28,645
Quebec South	3·59	12,239	15,467	27,706	7,717·55	24,163	21,833
Quebec West	116·66	18,349	19,644	37,993	325·67	30,506	24,897
Richelieu	193·10	9,289	9,475	18,764	97·17	19,810	18,576
Richmond and Wolfe	1,224·32	21,693	20,555	42,248	34·51	39,491	34,137
Rimouski	2,089·44	13,865	13,655	27,520	13·17	23,951	21,636
Ste. Anne	–	25,884	26,165	52,049	–	41,541	41,225
St. Antoine	–	14,823	17,571	32,394	–	34,794	47,653
St. Denis	–	38,276	40,644	78,920	–	45,141	10,391
St. Hyacinthe-Rouville	520·58	17,910	18,844	36,754	70·60	35,473	34,950

[1] By map measurement. [2]Includes part added by Extension of Boundaries Act, 1912. [3]Includes unorganized parts.

5.—Area and Population of Canada by Provinces and Electoral Districts, 1921, 1911 and 1901—continued.

Provinces and Districts.	Land area in sq. miles.	Population, 1921.				1911.	1901.
		Males.	Females.	Total.	Per sq. mile.		
Quebec—concluded.							
St. James	–	20,462	21,981	42,443	–	44,057	42,618
St. Johns and Iberville	403·02	11,943	11,575	23,518	58·35	21,882	20,679
St. Lawrence-St. George	–	18,150	18,762	36,912	–	38,883	21,889
Ste. Marie	–	30,842	33,133	63,975	–	62,521	40,631
Shefford	567·20	12,970	12,674	25,644	45·21	23,976	23,628
Sherbrooke	237·59	15,148	15,638	30,786	129·58	23,211	18,426
Stanstead	432·47	11,714	11,666	23,380	54·06	20,765	18,998
Témiscouata	1,806·18	22,638	21,672	44,310	24·53	36,430	29,185
Terrebonne	781·82	16,972	16,936	33,908	43·37	29,018	26,816
Three Rivers and St. Maurice	2,568·05	25,438	25,407	50,845	19·80	36,153	29,311
Vaudreuil-Soulanges	336·75	10,969	10,651	21,620	64·20	20,439	20,373
Westmount-St. Henri	–	29,785	33,124	62,909	–	56,088	40,960
Wright	2,297·27	11,424	10,426	21,850	9·51	21,171	19,589
Yamaska	393·12	9,432	9,408	18,840	47·92	20,387	21,506
Ontario	**365,800·00**[1]	**1,481,890**	**1,451,772**	**2,933,662**	**8·02**	**2,527,292**	**2,182,947**
Algoma East	20,678·17	22,815	17,803	40,618	1·96	37,699	25,211
Algoma West	22,153·98	18,332	15,344	33,676	1·52	28,752	17,894
Brant	334·23	10,180	9,905	20,085	60·09	19,259	18,273
Brantford	86·86	16,364	16,928	33,292	383·28	26,617	19,867
Bruce North	950·95	10,684	10,188	20,872	21·95	23,783	27,424
Bruce South	699·46	11,904	11,509	23,413	33·47	26,249	31,596
Carleton	650·87	16,751	15,922	32,673	50·19	24,417	22,880
Dufferin	556,64	7,996	7,419	15,415	27·69	17,740	21,036
Dundas	576·11	12,338	12,050	24,388	42·33	25,973	28,350
Durham	628·98	12,457	12,172	24,629	39·16	26,411	27,570
Elgin East	362·52	8,872	8,434	17,306	47·74	17,597	17,901
Elgin West	357·58	13,860	13,818	27,678	77·40	26,715	25,685
Essex North	239·27	37,111	34,039	71,150	297·36	38,006	28,789
Essex South	467·53	16,129	15,296	31,425	67·21	29,541	29,955
Fort William and Rainy River	12,784·68	21,573	18,088	39,661	3·10	32,158	18,461
Frontenac	1,595·91	10,672	9,718	20,390	12·77	21,944	24,746
Glengarry and Stormont	697·33	19,528	19,045	38,573	55·31	38,226	40,580
Grenville	462·83	8,266	8,378	16,644	35·96	17,545	21,021
Grey North	669·79	15,395	15,272	30,667	45·78	33,957	33,003
Grey Southeast	1,038·03	14,610	13,774	28,384	27·34	31,934	36,587
Haldimand	488·13	10,889	10,398	21,287	43·60	21,562	21,233
Halton	362·69	12,748	12,151	24,899	68·65	22,208	19,545
Hamilton East	2·69	24,983	24,837	49,820	18,520·44	39,793	24,000
Hamilton West	3·54	18,893	20,405	39,298	11,101·11	37,279	28,634
Hastings East	1,291·41	11,997	11,075	23,072	17·86	24,978	27,943
Hastings West	1,031·57	17,130	17,321	34,451	33·39	30,825	31,348
Huron North	660·11	11,657	11,883	23,540	35·66	26,886	30,966
Huron South	635·31	11,692	11,856	23,548	37·06	26,097	30,854
Kent	818·50	26,646	25,493	52,139	63·70	49,391	49,673
Kingston	3·54	11,666	12,438	24,104	6,809·03	20,660	19,788
Lambton East	647·81	13,084	12,717	25,801	39·82	28,827	34,440
Lambton West	575·57	16,976	15,912	32,888	57·13	29,109	29,723
Lanark	1,137·99	16,332	16,661	32,993	28·99	34,375	37,232
Leeds	899·68	17,338	17,571	34,909	38·80	36,753	37,975
Lennox and Addington	1,169·77	9,638	9,356	18,994	16·23	20,386	23,346
Lincoln	332·41	24,874	23,751	48,625	146·28	35,429	30,552
London	6·65	25,364	28,474	53,838	8,095·94	46,300	37,976
Middlesex East	481·00	14,581	13,413	27,994	58·18	23,465	23,339
Middlesex West	752·14	12,678	12,355	25,033	33·28	27,300	31,387
Muskoka	1,585·38	10,153	9,286	19,439	12·26	21,233	20,971
Nipissing	11,157·32	31,508	27,057	58,565	5·25	43,679	24,931
Norfolk	634·26	13,305	13,061	26,366	41·56	27,110	29,147
Northumberland	704·29	15,012	15,500	30,512	43·32	32,892	33,550
Ontario North	504·82	7,875	7,545	15,420	30·54	17,141	18,390
Ontario South	347·69	15,762	15,312	31,074	89·37	23,865	22,018
Ottawa	4·75	43,232	50,508	93,740	19,734·74	77,182	59,140
Oxford North	410·56	12,232	12,295	24,527	59·74	25,077	25,644
Oxford South	353·99	11,133	11,102	22,235	62·81	22,294	22,760

[1]By map measurement.

5.—Area and Population of Canada by Provinces and Electoral Districts, 1921, 1911 and 1901—continued.

Provinces and Districts.	Land area in sq. miles.	Population, 1921.				1911.	1901.
		Males.	Females.	Total.	Per sq. mile.		
Ontario—concluded.							
Parkdale	–	38,820	41,960	80,780	–	59,609	22,303
Parry Sound	4,336·00	14,716	12,306	27,022	6·23	26,547	24,936
Peel	468·51	12,371	11,525	23,896	51·01	22,102	21,475
Perth North	429·77	16,223	16,238	32,461	75·53	30,235	29,256
Perth South	409·81	9,315	9,067	18,382	44·85	18,947	20,615
Peterborough East	891·38	7,101	6,615	13,716	15·38	15,499	16,291
Peterborough West	553·81	14,382	14,936	29,318	52·93	26,151	20,704
Port Arthur and Kenora	207,570·90	24,136	19,164	43,300	0·21	39,109	10,526
Prescott	494·29	13,429	13,049	26,478	53·56	26,968	27,035
Prince Edward	390·40	8,288	8,518	16,806	43·04	17,150	17,864
Renfrew North	1,057·81	12,339	11,617	23,956	22·64	23,617	24,556
Renfrew South	1,644·95	13,765	13,296	27,061	16·45	27,852	27,676
Russell	698·68	22,084	21,329	43,413	62·13	39,434	35,166
Simcoe East	529·39	18,888	18,234	37,122	70·12	35,294	29,845
Simcoe North	574·88	11,227	10,873	22,100	38·44	24,699	26,071
Simcoe South	558·61	12,655	12,155	24,810	44·41	25,060	26,399
Timiskaming	46,211·00	30,219	21,349	51,568	1·11	37,380	3,378
Toronto Centre	–	25,326	26,442	51,768	–	54,792	45,888
Toronto East	–	31,096	33,729	64,825	–	53,712	36,763
Toronto North	–	32,378	40,100	72,478	–	51,318	20,766
Toronto South	–	19,335	18,261	37,596	–	43,956	38,108
Toronto West	–	32,717	35,680	68,397	–	57,804	41,069
Victoria	2,834·23	17,621	16,374	33,995	11·99	36,499	38,511
Waterloo North	273·20	20,591	21,107	41,698	152·62	33,619	27,124
Waterloo South	242·63	16,440	17,128	33,568	138·35	28,988	25,470
Welland	387·27	36,360	30,308	66,668	172·14	42,163	31,588
Wellington North	580·46	10,182	9,651	19,833	34·16	22,292	26,120
Wellington South	438·88	17,161	17,166	34,327	78·21	32,200	29,526
Wentworth	451·97	32,574	31,875	64,449	142·59	34,634	26,818
York East	64·52	38·163	39·787	77,950	1,208·15	32,864	8,478
York North	430·56	11,840	11,296	23,136	53·73	22,415	22,419
York South	202·28	49,572	50,484	100,054	494·63	31,933	18,964
York West	158·52	35,361	35,320	70,681	445·88	35,831	17,905
Manitoba	**231,926·00**[1]	**320,567**	**289,551**	**610,118**	**2,63**	**461,394**	**255,211**
Brandon	2,914·06	21,315	18,868	40,183	13·78	39,734	25,047
Dauphin	5,468·75	19,254	16,228	35,482	6·49	23,358	12,617
Lisgar	1,979·96	15,652	14,269	29,921	15·11	25,978	26,899
Macdonald	2,390·90	12,936	10,888	23,824	9·96	20,802	17,324
Marquette	5,454·24	22,433	18,821	41,254	7·56	32,384	20,435
Neepawa	3,491·53	15,464	12,892	28,356	8·12	23,923	19,140
Nelson	173,975·18	10,705	9,101	19,806	0·11	11,737	2,359
Portage la Prairie	1,710·22	12,027	10,227	22,254	13·01	22,059	14,969
Provencher	4,261·36	15,819	13,489	29,308	6·87	24,276	14,129
Selkirk	10,689·84	29,639	25,756	55,395	5·18	32,653	16,443
Souris	3,586·35	14,341	12,069	26,410	7·36	27,133	22,634
Springfield	15,944·15	30,935	27,935	58,870	3·69	37,247	20,290
Winnipeg Centre		39,125	37,345	76,470		58,903	
Winnipeg North	59·46	32,060	30,897	62,957	3,347·71	45,682	42,925
Winnipeg South		28,862	30,766	59,628		35,525	
Saskatchewan	**243,381·00**[1]	**413,700**	**343,810**	**757,510**	**3·12**	**492,432**	**91,279**
Assiniboia	5,850·86	18,831	15,958	34,789	5·95	31,975	9,053
Battleford	6,651·96	18,561	15,080	33,641	5·06	21,667	1,355
Humboldt	8,320·95	30,300	24,925	55,225	6·63	36,617	1,652
Kindersley	11,264·30	25,758	19,014	44,772	3·97	22,229	31
Last Mountain	7,085·51	27,731	22,324	50,055	7·06	33,093	1,575
Mackenzie	5,856·34	29,907	25,722	55,629	9·49	36,940	11,984
Maple Creek	15,149·09	31,318	24,746	56,064	3·70	19,730	1,473
Moose Jaw	5,591·12	27,376	23,027	50,403	9·01	31,552	3,725
North Battleford	72,000·00	26,121	21,260	47,381	0·66	24,330	4,579
Prince Albert	76,499·00	31,054	25,775	56,829	0·74	35,839	16,644
Qu'Appelle	4,458·06	18,819	16,017	34,836	7·81	30,470	17,133
Regina	2,063·25	26,395	23,582	49,977	24·22	44,202	6,581
Saltcoats	4,554·69	23,261	20,174	43,795	9·62	32,313	10,874

[1]By map measurement.

5.—Area and Population of Canada by Provinces and Electoral Districts, 1921, 1911 and 1901—concluded.

Provinces and Districts.	Land area in sq. miles.	Population, 1921.				1911.	1901.
		Males.	Females.	Total.	Per sq. mile.		
Saskatchewan—concluded.							
Saskatoon	3,453·38	28,862	26,289	55,151	15·97	31,633	2,964
Swift Current	7,958·48	29,220	24,055	53,275	6·69	28,691	484
Weyburn	6,051·89	19,826	15,862	35,688	5·89	31,081	1,172
Alberta	**252,985·00**[1]	**324,208**	**264,246**	**588,454**	**2·33**	**374,295**	**73,022**
Battle River	13,191·90	27,483	21,690	49,173	3·73	26,352	597
Bow River	11,259·86	32,460	22,896	55,356	4·92	27,304	1,565
Calgary East	2,033·59	23,819	21,176	44,995	22·13	35,163	5,526
Calgary West	4,630·00	22,733	21,608	44,341	9·58	30,023	3,546
Edmonton East	57,172·40	30,719	25,829	56,548	0·99	30,926	7,685
Edmonton West	112,497·43	41,947	32,320	74,267	0·66	35,386	7,641
Lethbridge	5,498·33	21,072	16,627	37,699	6·86	29,487	5,995
Macleod	9,017·00	18,976	15,032	35,008	3·77	30,779	8,228
Medicine Hat	12,497·00	23,982	19,197	43,179	3·46	24,697	3,185
Red Deer	13·431·84	27,426	22,203	49,629	3·69	37,507	7,568
Strathcona	5,309·09	22,682	19,838	42,520	8·01	28,355	12,635
Victoria	6,386·45	30,909	25,830	56,739	8·88	38,316	8,851
British Columbia	**353,416·00**	**293,409**	**231,173**	**524,582**	**1·48**	**392,480**	**178,657**
Burrard	620·79	34,387	35,535	69,922	112·63	48,493	1,267
Cariboo	164,693·50	23,934	15,900	39,834	0·24	26,541	29,155[2]
Comox-Alberni	18,227·46	20,665	11,344	32,009	1·75	19,739	8,444
Fraser Valley	304·95	17,054	11,757	28,811	94·48	22,645	8,219
Kootenay East	13,367·11	11,983	7,154	19,137	1·43	22,466	8,446
Kootenay West	12,979·11	16,880	13,622	30,502	2·35	28,373	23,516
Nanaimo	2,717·00	26,079	21,931	48,010	17·67	31,878	22,293
New Westminster	6,102·41	25,059	20,923	45,982	7·54	29,384	14,855
Skeena	123,896·14	19,083	9,851	28,934	0 23	22,685	13,013
Vancouver Centre	5·73	34,867	26,012	60,879	10,624·60	60,104	27,010
Vancouver South	32·24	23,439	22,698	46,137	1,431·04	20,446	1,520
Victoria	7·50	20,107	18,620	38,727	5,163·60	31,660	20,919
Yale	10,462·06	19,872	15,826	35,698	3·41	28,066	[3]
Yukon	206,427·00	2,819	1,338	4,157	0·02	8,512	27,219
Northwest Territories	1,207,926·00	4,129	3,859	7,988	0·007	6,507	20,129
Royal Canadian Navy	–	485	–	485	–	–	–
Canada	**3,603,909·00**	**4,529,945**	**4,258,538**	**8,788,483**	**2·44**	**7,206,643**	**5,371,315**

[1] By map measurement for provinces and electoral districts.
[2] Includes Yale District. [3] Included in Cariboo District.

Density of Population.—The density of population in 1921 (*i.e.*, the number of persons per square mile of the land area), is shown by provinces and for the country as a whole in Table 6. Generally speaking, the density of population decreases as one travels westward, but the enormous area of the province of Quebec reduces the density of its population to the low figure of 3·42. As among the nine provinces, the density of population is greatest in Prince Edward Island and least in British Columbia.

6.—Density of Population in Canada according to the Census of 1921.

Prince Edward Island	40·56	Saskatchewan	3·12
Nova Scotia	24·86	Alberta	2·33
New Brunswick	13·90	British Columbia	1·48
Quebec	3·42	Yukon Territory	0·02
Ontario	8·02	Northwest Territories	–
Manitoba	2·63	**Canada**	**2·44**

Elements of Growth.—The lack of comprehensive and comparable vital statistics for the whole of Canada, together with the lack of statistics of emigration, makes it difficult to determine how far the growth of population is due to natural increase and how far to immigration. The following estimate (Table 7) may, however, be of interest. During the last decade, in addition to some 60,000 Canadians who died overseas and nearly 20,000 who took their discharge in the United Kingdom, there were also great numbers of residents of Canada—most of them recent immigrants—who left Canada to join the forces of the Mother Country and of her allies in the Great War and did not return. The estimated figure given for emigration in the decade 1911-1921 may therefore be regarded as of a distinctly abnormal character.

7.—Movement of Population, including estimated Natural Increase, recorded Immigration, and estimated Emigration, for the intercensal periods 1901-1911 and 1911-1921.

Decades and Items.	No.
Decade 1901-1911—	
Population, Census of April 1, 1901	5,371,315
Natural increase (1901-1911 inclusive), estimated	853,566
Immigration (April 1, 1901 to May 31, 1911)	1,847,651
Total	8,072,532
Population, Census of June 1, 1911	7,206,643
Emigration (April 1, 1901 to May 31, 1911), estimated	865,889
Decade 1911-1921—	
Population, Census of June 1, 1911	7,206,643
Natural increase (1911-1921), estimated	1,150,659
Immigration (June 1, 1911 to May 31, 1921)	1,728,921
Total	10,086,223
Population (Census of June 1, 1921)	8,788,483
Emigration (June 1, 1911 to June 1, 1921), estimated	1,297,740[1]
Net gain in population, 1901-1911	1,835,328
Net gain in population, 1911-1921	1,581,840

[1] This figure includes also the 60,000 Canadian lives lost at the front and the soldiers (about 20,000) enlisting in Canadian forces and receiving their discharge in the United Kingdom.

2.—Sex Distribution.

Throughout the older countries of the world there is usually found an excess of female over male population, more especially as in most of these countries the census is taken on a *de facto* instead of, as in Canada, on a *de jure* basis. The causes of this excess of female population are: (1) the normally higher rate of mortality among males; (2) the greater number of males who travel; (3) the effects of war; (4) the employment of males in the army, navy and merchant marine; and (5) the preponderance of males among emigrants. In the newer countries of the world, however, the last of these causes results in a general excess of male over female population. Both of these phenomena are exemplified in Table **10.**

In Canada there has been such an excess of male population from the commencement of its history, the first census of 1665 showing 2,034 males to only 1,181 females. As the colony increased in numbers, the disproportion between the sexes became smaller, more especially since the French-Canadian population after about 1680 was not reinforced by immigration from the old world. In 1784, when the English-speaking immigration to Canada for purposes of settlement was com-

mencing, there were 54,064 males and 50,759 females in the country. At the middle of the nineteenth century, there were 449,967 males to 440,294 females in Lower Canada, and 499,067 males to 452,937 females in the more newly-settled Upper Canada, and since Confederation the same phenomenon of considerable excess of males has occurred throughout the growing Northwest. The great immigration of the first decade of the present century resulted in raising what is called the "masculinity" of the Canadian population (*i.e.*, the excess of males over females per 100 of population) to the highest point in recent history, viz., 6·07 p.c. in 1911. The great war, however, both checked immigration and took some 60,000 young Canadian male lives as its toll, with the result that at the census of 1921 the masculinity of our population was only 3 p.c.—515 males to 485 females per 1,000 of population. Thus masculinity in the country as a whole and also in all the provinces except Prince Edward Island, has been since 1911 on the decline—a phenomenon which must be regarded with satisfaction, since an approximation to equality in the numbers of the sexes is desirable both in the interests of morality and also as promotive of the birth rate (an important consideration in a country where the density of population is only 2·44 to the square mile). In Table 8 statistics are presented, showing the number of males and females in each of the provinces and territories at each census since 1871, while Table 9 shows the proportions of the sexes and excess of males per 1,000 of population. The statistics of Table **10** show the position of Canada among other countries of the world in regard to masculinity.

8.—Sex Distribution of the People of Canada, by Provinces, 1871-1921.

Provinces.	1871.		1881.		1891.	
	Male.	Female.	Male.	Female.	Male.	Female.
Prince Edward Island	47,121	46,900	54,729	54,162	54,881	54,197
Nova Scotia	193,792	194,008	220,538	220,034	227,093	223,303
New Brunswick	145,888	139,706	164,119	157,114	163,739	157,524
Quebec	596,041	595,475	678,175	680,852	744,141	744,394
Ontario	828,590	792,261	978,554	948,368	1,069,487	1,044,834
Manitoba	12,864	12,364	35,123	27,137	84,342	68,164
Saskatchewan	–	–	–	–	–	–
Alberta	–	–	–	–	–	–
British Columbia	20,694	15,553	29,503	19,956	63,003	35,170
Yukon Territory	–	–	–	–	–	–
Northwest Territories	24,274	23,726	28,113	28,333	53,785	45,182
Canada	**1,869,264**	**1,819,993**	**2,188,854**	**2,135,956**	**2,460,471**	**2,372,768**

Provinces.	1901.		1911.		1921.	
	Male.	Female.	Male.	Female.	Male.	Female.
Prince Edward Island	51,959	51,300	47,069	46,659	44,887	43,728
Nova Scotia	233,642	225,932	251,019	241,319	266,472	257,365
New Brunswick	168,639	162,481	179,867	172,022	197,351	190,525
Quebec	824,454	824,444	1,012,815	992,961	1,180,028	1,181,171
Ontario	1,096,640	1,086,307	1,301,272	1,226,020	1,481,890	1,451,772
Manitoba	138,504	116,707	252,954	208,440	320,567	289,551
Saskatchewan	49,431	41,848	291,730	200,702	413,700	343,810
Alberta	41,019	32,003	223,792	150,503	324,208	264,246
British Columbia	114,160	64,497	251,619	140,861	293,409	231,173
Yukon Territory	23,084	4,135	6,508	2,004	2,819	1,338
Northwest Territories	10,176	9,953	3,350	3,157	4,129	3,859
Royal Canadian Navy	–	–	–	–	485	–
Canada	**2,751,708**	**2,619,607**	**3,821,995**	**3,384,648**	**4,529,945**	**4,258,538**

9.—Proportion of Sexes per 1,000 of Population in Canada, by Provinces, 1871-1921.

Provinces.	1871.			1881.			1891.		
	Males.	Females.	Excess of Males over Females.	Males.	Females.	Excess of Males over Females.	Males.	Females.	Excess of Males over Females.
Prince Edward Island	501	499	2	503	497	6	504	496	8
Nova Scotia	500	500	–	501	499	2	504	496	8
New Brunswick	511	489	22	511	489	22	510	490	20
Quebec	500	500	–	499	501	–2	500	500	–
Ontario	511	489	22	508	492	16	506	494	12
Manitoba	510	490	20	564	436	128	553	447	106
Saskatchewan	–	–	–	–	–	–	–	–	–
Alberta	–	–	–	–	–	–	–	–	–
British Columbia	571	429	142	597	403	194	642	358	284
Yukon Territory	–	–	–	–	–	–	–	–	–
Northwest Territories	506	494	12	498	502	–4	543	457	86
Canada	**507**	**493**	**14**	**506**	**494**	**12**	**509**	**491**	**18**

Provinces.	1901.			1911.			1921.		
	Males.	Females.	Excess of Males over Females.	Males.	Females.	Excess of Males over Females.	Males.	Females.	Excess of Males over Females.
Prince Edward Island	503	497	6	502	498	4	507	493	14
Nova Scotia	508	492	16	510	490	20	509	491	18
New Brunswick	509	491	18	511	489	22	509	491	18
Quebec	500	500	–	505	495	10	500	500	–
Ontario	502	498	4	515	485	30	505	495	10
Manitoba	543	457	86	548	452	96	525	475	50
Saskatchewan	541	459	82	592	408	184	546	454	92
Alberta	562	438	124	598	402	196	551	449	102
British Columbia	639	361	278	641	359	282	559	441	118
Yukon Territory	848	152	696	765	235	530	678	322	356
Northwest Territories	506	494	12	515	485	30	517	483	34
Royal Canadian Navy	–	–	–	–	–	–	1,000	–	1,000
Canada	**512**	**488**	**24**	**530**	**470**	**60**	**515**	**485**	**30**

10.—Masculinity of the Population of Various Countries.

Country.	Year.	Excess of males over females in each 100 population.	Country.	Year.	Excess of males over females in each 100 population.
Argentine Republic	1918	7·27	Spain	1920	–1·34
Canada	1921	3·00	Switzerland	1910	–1·62
Union of South Africa[1]	1921	2·92	France	1911	–1·74
India	1921	2·88	Sweden	1920	–1·76
New Zealand	1921	2·26	Italy	1911	–1·81
United States of America	1920	1·98	Finland	1919	–2·12
Australia	1921	1·58	Denmark	1921	–2·44
Ireland	1919	1·08	Norway	1920	–2·60
Roumania	1915	0·75	Scotland	1921	–3·79
Japan	1920	0·22	Austria	1920	–4·24
Bulgaria	1920	0·19	Prussia	1919	–4·49
Chile	1920	–0·57	England and Wales	1921	–4·54
Greece	1920	–0·66	Poland	1920	–4·66
Netherlands	1920	–0·67	German Empire	1919	–4·78
Belgium	1920	–1·04	Russia	1920	–4·78
			Portugal	1911	–5·08

[1] White population only.

NOTE.—The minus sign (–) indicates a deficiency of males.

3.—Conjugal Condition.

In Table 11 are given in summary form, together with percentages, the statistics of the conjugal condition of the population, as single, married, widowed, divorced, legally separated and not given, for the six censuses since 1871. Especially notable is the larger percentage of married in the more recent years. This is mainly attributable to the larger percentage of adults to total population in our own time. Noteworthy also is the larger percentage of divorced and legally separated in recent years. The reader should also consult in the index the heading "Divorces in Canada, 1868-1922," for the number of divorces granted in each year since Confederation.

The conjugal condition of the 1921 population is shown by provinces in Table 12 and by age-groups in Table 13.

11.—Conjugal Condition of the Population by numbers and percentages, as shown by Censuses of 1871, 1881, 1891, 1901, 1911 and 1921.

Sex.	Single.	Married.	Widowed.	Divorced.	Legally Separated.	Not Given.	Total.
1871—							
Male	1,183,787	543,037	37,487	–	–	–	1,764,311
Female	1,099,216	542,339	79,895	–	–	–	1,721,450
1881—							
Male	1,447,415	690,544	50,895	–	–	–	2,188,854
Female	1,336,981	689,540	109,435	–	–	–	2,135,956
1891—							
Male	1,601,541	796,153	62,777	–	–	–	2,460,471
Female	1,451,851	791,902	129,015	–	–	–	2,372,768
1901—							
Male	1,748,582	928,952	73,837	337	–	–	2,751,708
Female	1,564,011	904,091	151,181	324	–	–	2,619,607
1911—							
Male	2,369,766	1,331,853	89,154	839	1,286	29,097	3,821,995
Female	1,941,886	1,251,468	179,656	691	1,584	9,363	3,384,648
1921—							
Male	2,698,754	1,698,395	119,708	3,670	[1]	9,418	4,529,945
Female	2,378,844	1,631,761	236,522	3,731	[1]	7,680	4,258,538
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
1871—							
Male	67·10	30·78	2·2	–	–	–	100
Female	63·85	31·51	4·64	–	–	–	100
1881—							
Male	66·12	31·55	2·33	–	–	–	100
Female	62·59	32·28	5·13	–	–	–	100
1891—							
Male	65·09	32·36	2·55	–	–	–	100
Female	61·18	33·38	5·44	–	–	–	100
1901—							
Male	63·55	33·76	2·68	·01	–	–	100
Female	59·70	34·52	5·77	·01	–	–	100
1911—							
Male	62·01	34·85	2·33	·02	·03	·76	100
Female	57·37	36·97	5·31	·02	·05	·28	100
1921—							
Male	59·57	37·49	2·64	·09	–	·21	100
Female	55·86	38·32	5·55	·09	–	·18	100

[1] Legally separated included with divorced.

12.—Conjugal Condition of the People of Canada classified as Single, Married, Widowed, Divorced, Legally Separated, and not given, by Provinces, Census 1921.

Provinces.	Males.					
	Single.	Married.	Widowed.	Divorced[1]	Not given	Total.
Prince Edward Island	27,634	15,668	1,549	24	12	44,887
Nova Scotia	162,835	94,808	8,440	217	172	266,472
New Brunswick	121,428	69,674	5,918	125	206	197,351
Quebec	736,144	406,540	32,912	603	3,829	1,180,028
Ontario	828,538	607,186	42,954	1,135	2,077	1,481,890
Manitoba	196,072	117,480	6,472	246	297	320,567
Saskatchewan	263,186	142,431	7,456	337	290	413,700
Alberta	199,741	117,081	6,667	413	306	324,208
British Columbia	159,629	125,656	7,118	547	459	293,409
Yukon Territory	1,808	735	152	22	102	2,819
Northwest Territories	1,460	935	66	1	1,667	4,129
Royal Canadian Navy	279	201	4	–	1	485
Total	**2,698,754**	**1,698,395**	**119,708**	**3,670**	**9,418**	**4,529,945**

Provinces.	Females.					
	Single.	Married.	Widowed.	Divorced[1]	Not given	Total
Prince Edward Island	24,717	15,616	3,358	18	19	43,728
Nova Scotia	144,859	93,384	18,752	210	160	257,365
New Brunswick	109,670	68,860	11,676	106	213	190,525
Quebec	720,362	399,271	57,809	758	2,971	1,181,171
Ontario	759,901	589,518	99,259	1,369	1,725	1,451,772
Manitoba	162,928	113,795	12,349	260	219	289,551
Saskatchewan	196,499	136,270	10,567	233	241	343,810
Alberta	143,958	110,190	9,607	289	202	264,246
British Columbia	114,199	103,433	12,846	483	212	231,173
Yukon Territory	582	576	78	4	98	1,338
Northwest Territories	1,169	848	221	1	1,620	3,859
Total	**2,378,844**	**1,631,761**	**236,522**	**3,731**	**7,680**	**4,258,538**

[1] Includes "legally separated."

13.—Conjugal Condition of the Population, 15 Years of Age and Over, 1921.

Age Periods.	Total population.	Single.		Married.		Widowed.		Divorced.	Unknown.
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Number.
15-19—									
Males	403,259	400,929	99·4	2,275	0·6	28	–	6	21
Females	398,559	371,969	93·3	26,364	6·6	175	–	38	13
20-24—									
Males	350,984	287,438	81·9	62,812	17·9	600	0·2	87	47
Females	360,227	205,386	57·0	152,605	42·4	1,971	0·6	244	21
25-29—									
Males	347,645	165,836	47·7	178,994	51·5	2,519	0·7	234	62
Females	338,874	97,394	28·7	235,513	69·5	5,527	1·6	424	16
30-34—									
Males	343,263	95,571	27·8	242,444	70·6	4,789	1·4	387	72
Females	309,623	53,090	17·2	247,409	79·9	8,592	2·8	517	15
35-39—									
Males	342,313	68,726	20·1	265,917	77·7	7,103	2·1	470	97
Females	290,080	37,907	13·1	240,088	82·8	11,497	3·9	576	12
40-44—									
Males	286,470	47,273	16·5	230,132	80·3	8,438	2·9	556	71
Females	240,666	28,634	11·9	197,768	82·2	13,773	5·7	478	13
45-49—									
Males	236,896	33,463	14·1	193,384	81·6	9,542	4·0	455	52
Females	198,133	22,054	11·1	159,028	80·3	16,611	8·4	424	16
50-54—									
Males	195,141	25,163	12·9	158,616	81·3	10,863	5·6	457	42
Females	166,817	18,810	11·3	126,183	75·6	21,438	12·9	370	16

13.—Conjugal Condition of the Population, 15 Years of Age and Over, 1921—concluded.

Age Periods.	Total population.	Single.		Married.		Widowed.		Divorced.	Unknown.
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Number.
55-59—									
Males	148,137	16,876	11·4	119,693	80·8	11,191	7·6	349	28
Females	132,167	13,634	10·3	94,061	71·2	24,198	18·3	266	8
60-64—									
Males	126,400	13,916	11·0	98,588	78·0	13,573	10·7	300	23
Females	112,885	12,037	10·7	70,275	62·3	30·366	26·9	186	21
65-69—									
Males	90,621	8,514	9·4	68,125	75·2	13,770	15·2	183	29
Females	81,383	8,109	9·9	43,234	53·1	29,913	36·8	112	15
70-74—									
Males	60,581	5,302	8·8	41,786	68·9	13,352	22·0	107	34
Females	56,850	5,983	10·5	23,152	40·7	27,642	48·6	54	19
75-79—									
Males	35,584	2,800	7·9	21,645	60·8	11,082	31·1	44	13
Females	35,767	3,642	10·2	10,302	28·8	21,787	60·9	21	15
80-84—									
Males	18,137	1,335	7·4	9,171	50·6	7,604	41·9	19	8
Females	19,465	2,038	10·5	3,552	18·3	13,849	71·2	13	13
85-89—									
Males	7,142	485	6·8	2,913	40·8	3,728	52·2	8	8
Females	8,237	816	9·9	961	11·7	6,457	78·4	2	1
90-94—									
Males	1,800	129	7·2	589	32·7	1,079	59·9	2	1
Females	2,380	228	9·6	195	8·2	1,949	81·9	1	7
95-99—									
Males	412	17	4·1	123	29·9	271	65·8	–	1
Females	565	55	9·7	40	7·1	470	83·2	–	–
100 and over—									
Males	90	4	4·4	34	37·8	51	56·7	–	1
Females	93	5	5·4	2	2·2	86	92·5	–	–
Age not given—									
Males	11,601	1,508	13·0	1,154	9·9	125	1·1	6	8,808
Females	9,676	1,002	10·4	989	10·2	221	2·3	5	7,459
Total, 15 years and over—[1]									
Males	2,994,875	1,173,777	39·2	1,697,241	56·7	119,583	4·0	3,664	610
Females	2,752,771	881,791	32·3	1,630,732	59·2	236,301	8·6	3,726	221
Total all ages	**8,788,483**	**5,077,598**	**57·8**	**3,330,156**	**37·9**	**356,230**	**4·0**	**7,401**	**17,098**
Males	4,529,945	2,698,754	59·6	1,698,395	37·5	119,708	2·6	3,670	9,418
Females	4,258,538	2,378,844	55·8	1,631,761	38·3	236,522	5·6	3,731	7,680

[1] Exclusive of ages not given.

NOTE.—Ages of persons legally separated are included with divorced.

4.—Dwellings and Families.

In 1921 the number of occupied dwellings in Canada, exclusive of the Yukon and Northwest Territories, for which the statistics are not available, was 1,768,129 and the number of families 1,901,227 as compared with 1,408,689 dwellings and 1,482,980 families in the same area in 1911, and 1,018,015 dwellings and 1,058,386 families in 1901.

The average number of persons per dwelling in 1921, as respects the 8,775,853 persons in the nine provinces, was 4·96 as against 5·11 in 1911 and 5·23 in 1901; this would imply that the Canadian people are not less adequately housed than in the past. The average number of persons per family was 4·62 in 1921 as against 4·85 in 1911 and 5·03 in 1901, indicating a continued decline in the average number persons constituting a household.

14.—Number of Dwellings and Families in Canada by Provinces, as shown by the Census of 1921.

Provinces.	Dwellings.	Families.	Provinces.	Dwellings.	Families.
	No.	No.		No.	No.
Prince Edward Island	18,628	18,801	Saskatchewan	163,661	168,555
Nova Scotia	102,807	108,723	Alberta	136,125	141,190
New Brunswick	70,428	76,949	British Columbia	123,003	134,040
Quebec	398,384	442,356	Yukon Territory	–	–
Ontario	637,552	681,629	Northwest Territories	–	–
Manitoba	117,541	128,984	**Total**	**1,768,129**	**1,901,227**

5.—Age Distribution.

The same causes which have in the past rendered the sex distribution of population in Canada somewhat unusual have also affected its age distribution. In the first stages of the settlement of a new colony, men in the prime of life constitute the bulk of the population, and women and children are conspicuous by their absence, so that there will be a disproportionately large male population between the ages of 20 and 50, together with a low birth rate. Later on in the settlement of a new country where there is land and food for all and where the early disproportion of the sexes has been overcome, there is a very high rate of natural increase, and an extraordinarily large proportion of children among the population. Thus in 1871 (see Table **15**), no fewer than 287 out of every 1,000 of the population of Canada were children under 10 years of age and over half the total population (526·76 out of every 1,000) were under 20 years of age. But with the growing urbanization of population, the average age at marriage increased and children came to be regarded as a liability rather than an asset. Thus in 1911, out of every 1,000 of the population, only 231·83 were under 10 years of age and 423·42 under 20 years of age. In 1921, however, 239·68 per 1,000 of the population were under 10 years of age and 434·82 per 1,000 under 20 years, the increase since 1911 being probably attributable to the decline in the proportion of adult immigrants to the total population.

Again, the change in the age distribution of the population of Canada since 1871 may be illustrated as follows: taking the Canadian who in 1921 was at the median age (*i.e.*, had exactly as many of the population younger than he as were older than he), we find that as nearly as can be estimated, this Canadian was in 1921, 23·943 years of age. Taking the males alone, their median age was in 1921, 24·732 years, while the median age for females was 23·173 years. Now, taking the population of the four original provinces as taken at the census of 1871, and securing its median age, as nearly as can be estimated we find that that age was for the total population 18·799 years, for the male population 18·777 years and for the female population 18·821 years. Thus the Canadian of median age with exactly as many people younger as there are older, was in 1921 5·144 years older than in 1871—a fact mainly attributable to the smaller proportion of children in the population in the more recent year, but partly to the longer average period of life.

15.—Proportion per 1,000 of the Population by Age-Periods, 1871, 1881, 1891, 1901, 1911 and 1921.

Age Periods.	1871.	1881.	1891.	1901.	1911.	1921.
Under 1 year	30·567	28·019	24·922	24·497	25·734	23·859
1— 4 years	115·649	108·508	99·963	95·211	97·413	96·486
5— 9 "	140·691	128·251	121·242	114·663	108·685	119·334
10—19 "	239·854	227·404	219·712	210·906	191·585	195·138
20—29 "	171·436	175·957	178·080	173·550	189·335	159·041
30—39 "	111·404	113·099	122·079	129·259	141·938	146·246
40—49 "	79·995	83·817	88·441	98·494	100·071	109·480
50—59 "	54·788	58·086	62·360	67·886	69·121	73·080
60 and over	55·128	63·269	70·141	76·396	71·027	74·915
Not given	0·487	13·589	13·059	9·137	5·090	2·421

16.—Proportion per 1,000 of the Population by Age-Periods by Provinces, 1921, with Totals for 1911.

Provinces.	0–9 years.	10–19 years.	20–44 years.	45–69 years.	70 years and over.	Age not given.
Prince Edward Island	218·83	204·31	312·33	203·79	60·24	0·50
Nova Scotia	229·58	208·32	331·50	182·53	47·26	0·81
New Brunswick	247·07	213·41	327·19	172·58	38·53	1·22
Quebec	264·22	219·26	335·09	150·52	27·08	3·83
Ontario	207·66	180·66	377·44	197·82	34·87	1·55
Manitoba	258·99	197·44	379·89	145·82	16·87	0·99
Saskatchewan	289·93	190·67	382·89	123·82	11·65	1·04
Alberta	262·36	183·38	400·39	141·18	11·70	0·99
British Columbia	198·31	158·07	424·57	198·89	18·42	1·74
Canada, 1921[1]	**239·68**	**195·14**	**365·27**	**169·38**	**28·11**	**2·42**
Canada, 1911[1]	**231·83**	**191·59**	**385·35**	**158·03**	**28·12**	**5·09**

[1]The statistics for the Yukon and the Northwest Territories are not given in the table, but are included in the total population of Canada.

17.—Male and Female Population of Canada by Age-Periods, 1881, 1891, 1901, 1911 and 1921.

Age Periods.	1881.			1891.		
	Male.	Female.	Total.	Male.	Female.	Total.
Under 1 year	61,704	59,473	121,177	61,308	59,149	120,457
1 year	50,298	48,288	98,586	52,160	50,833	102,993
2 years	65,187	63,069	128,256	65,465	63,898	129,363
3 years	62,217	60,455	122,672	63,854	62,047	125,901
4 years	60,616	59,144	119,760	63,328	61,563	124,891
Total under 5 years	**300,022**	**290,429**	**590,451**	**306,115**	**297,490**	**603,605**
5 to 9 years	281,216	273,446	554,662	297,385	288,605	585,990
10 to 14 "	259,154	247,728	506,882	279,889	269,287	549,176
15 to 19 "	237,317	239,281	476,598	258,325	254,412	512,737
20 to 24 "	211,634	217,771	429,405	237,144	235,913	473,057
25 to 29 "	165,339	166,236	331,575	194,531	193,115	387,646
30 to 34 "	131,051	129,538	260,589	163,866	155,724	319,590
35 to 39 "	115,029	113,515	228,544	139,899	130,551	270,450
40 to 44 "	97,807	95,537	193,344	118,954	112,685	231,639
45 to 49 "	86,784	82,364	169,148	100,827	94,992	195,819
50 to 54 "	72,046	68,762	140,808	87,861	83,565	171,426
55 to 59 "	57,379	53,027	110,406	66,887	63,089	129,976
60 to 64 "	52,006	45,354	97,360	62,819	57,403	120,222
65 to 69 "	36,544	32,052	68,596	44,717	40,172	84,889
70 to 74 "	26,158	23,453	49,611	32,941	29,906	62,847
75 to 79 "	16,361	14,649	31,010	20,047	17,864	37,911
80 to 84 "	9,251	8,307	17,558	10,798	10,151	20,949
85 to 89 "	3,344	3,151	6·495	4,160	4,390	8,550
90 to 94 "	987	1,094	2,081	1,360	1,436	2,796
95 to 99 "	330	379	709	411	437	848
100 and over	99	110	209			
Not given	28,996	29,773	58,769	31,535	31,581	63,116
Total population	**2,183,854**	**2,135,956**	**4,324,810**	**2,460,471**	**2,372,768**	**4,833,239**

17.—Male and Female Population of Canada by Age-Periods, 1881, 1891, 1901, 1911 and 1921—concluded.

Age Periods.	1901.			1911.			1921.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Under 1 year.....	66,464	65,116	131,580	93,513	91,946	185,459	105,953	103,731	209,684
1 year.....	62,384	61,203	123,587	87,399	86,002	173,401	104,575	103,213	207,788
2 years.....	65,245	64,182	129,427	90,697	88,943	179,640	105,815	104,152	209,967
3 years.....	64,748	64,158	128,906	89,688	87,730	177,418	108,421	106,214	214,635
4 years.....	65,455	64,030	129,485	86,922	84,643	171,565	108,685	106,891	215,576
Total under 5 years....	**324,296**	**318,689**	**642,985**	**448,219**	**439,264**	**887,483**	**533,449**	**524,201**	**1,057,650**
5 to 9 years....	311,134	304,765	615,899	395,045	388,207	783,252	528,700	520,061	1,048,761
10 to 14 "	295,674	284,665	580,339	354,911	345,401	700,312	461,320	451,829	913,149
15 to 19 "	280,275	272,228	552,503	351,244	329,129	680,373	403,259	398,559	801,818
20 to 24 "	256,981	251,823	508,804	385,855	320,435	706,290	350,984	360,227	711,211
25 to 29 "	216,334	207,051	423,385	370,494	287,684	658,178	347,645	338,874	686,519
30 to 34 "	188,125	174,942	363,067	310,339	244,777	555,116	343,263	309,623	652,886
35 to 39 "	172,553	158,673	331,226	257,875	209,904	467,779	342,313	290,080	632,393
40 to 44 "	152,036	137,822	289,858	213,018	176,677	389,695	286,470	240,666	527,136
45 to 49 "	125,636	113,550	239,186	178,715	152,768	331,483	236,896	198,133	435,029
50 to 54 "	106,107	97,857	203,964	152,718	132,366	285,084	195,141	166,817	361,958
55 to 59 "	82,136	78,535	160,671	112,952	100,096	213,048	148,137	132,167	280,304
60 to 64 "	72,807	68,156	140,963	94,318	83,786	178,104	126,400	112,885	239,285
65 to 69 "	54,497	51,176	105,673	67,626	63,523	131,149	90,621	81,383	172,004
70 to 74 "	39,086	37,294	76,380	47,807	46,197	94,004	60,581	56,859	117,431
75 to 79 "	24,548	23,248	47,796	30,266	29,260	59,526	35,584	35,767	71,351
80 to 84 "	13,090	12,740	25,830	15,550	15,921	31,471	18,137	19,465	37,602
85 to 89 "	4,848	4,990	9,838	6,184	6,687	12,871	7,142	8,237	15,379
90 to 94 "	1,356	1,554	2,910	1,693	2,010	3,703	1,800	2,380	4,180
95 to 99 "	423	538	961	417	502	919	412	565	977
100 and over.....				62	58	120	90	93	183
Not given.....	29,766	19,311	49,077	26,687	9,996	36,683	11,601	9,676	21,277
Total population.....	**2,751,708**	**2,619,607**	**5,371,315**	**3,821,995**	**3,381,648**	**7,206,643**	**4,529,945**	**4,258,538**	**8,788,483**

6.—Racial Origin.

In five out of the six censuses of Canada since Confederation the racial origin of each person has been secured, the exception being in 1891. The object of this question is to ascertain from what basic ethnic stocks the Canadian population, more particularly the recently immigrated population, is derived. The answer "Canadian" is not accepted under this heading as the purpose of the question is to obtain, in so far as possible, a definition of "Canadian" in terms of racial derivation. Of this procedure of the Census, criticism has been received on two main grounds: (*a*) That there are Canadians whose family is of several generations residence in the country who may not know their ultimate racial origin, or who may be of very mixed racial origin; and (*b*) that the practice tends to perpetuate racial distinctions which it is desirable to obliterate. As against these criticisms respectively, the following must be considered: (*a*) that Canadians whose family is of three or more generations residence are enumerated and differentiated through the question on the birth place of parents above described; (*b*) that notwithstanding the desirability of racial assimilation, there are special features in connection with the process that require appraisement and study; for example, 295 children of Chinese fathers and 618 of Japanese fathers were born in Canada (not including the province of Quebec) in 1921. Again, the fact that the constitution of Canada is based on the presence of two dominant races points to the desirability of a measurement of these factors; only recently it has been widely pointed out that the original

French colony, numbering 75,000 at the date of the Conquest, has expanded to over three millions today; measurements of this kind would be impossible if the answer "Canadian" instead of "French" were accepted under the heading of racial origin, yet undoubtedly if the descendants of the original French colonists are not "Canadians," no one is; (c) finally, racial origin is an important subject for study in a "new" country like Canada from a scientific standpoint, *i.e.*, from the standpoint of the student of ethnology, criminology, and the social and "biometric" sciences in general.

To accept the answer "Canadian" to the question on racial origin would confuse the data and defeat the purpose for which the question is asked.

Racial Distribution in 1901-1911 and 1921.—The racial origins of the people of Canada as collected at the censuses of 1871, 1881, 1901, 1911 and 1921 are shown in Table **19**, while percentage figures are given in Table **20** for the populations of the various racial origins at the above censuses.

During the past decade the total increase of population was 1,581,840. The increase in the population of English origin was 722,346 or 45·68 p.c. of the total; of Irish 57,433 or 3·63 p.c.; of Scottish 175,757 or 11·11 p.c.; of other British 16,382 or 1·03 p.c.; of French 397,892 or 25·28 p.c. The British races were responsible for 61·66 p.c. of the total increase in population during the decade, and, together with the French population, which is almost wholly a native-born population, account for 1,369,997 or more than 86·5 p.c. of the total increase for the decade.

When the change in the racial distribution of the population during the first two decades of the century is considered, one of the most notable features is the increase in the population of English race from 23·47 p.c. in 1901 to 25·30 p.c. in 1911 and 28·96 p.c. in 1921. The Irish element in the population has declined fairly rapidly from 18·41 p.c. in 1901 to 14·58 p.c. and 12·60 p.c. in 1921, and the Scottish from 14·90 in 1901 to 13·85 in 1911 and 13·36 in 1921. The total population of the British races was 57·03 p.c. in 1901, 54·08 p.c. in 1911 and 55·40 p.c. in 1921. The other great racial element in the population is the French, which constituted 30·70 p.c. of the total population in 1901, 28·52 p.c. in 1911 and 27·91 p.c. in 1921. Thus 87·73 p.c. of the population were in 1901 of the two great racial stocks, 82·60 p.c. in 1911 and 83·31 p.c. in 1921. Thus, taking the past 20 years as a unit of time, there has been a decline in the percentage of the British and French racial elements to the total population.

This decline has in the main been due to the immigration of continental Europeans to Canada during the past twenty years, which have seen the growth of the Scandinavian element in our population from ·58 p.c. to 1·90 p.c., of the Hebrews from ·30 p.c. to 1·44 p.c., and of the Italians from ·20 to ·76 p.c. The population of German race, if we may accept the statistics furnished, has declined from 5·78 p.c. of the total in 1901 to 3·35 p.c., but on the other hand, the Dutch have increased from ·63 p.c. in 1901 to 1·33 p.c. in 1921. Altogether, the percentage of the total population of European racial origin, other than British and French, increased from 8·51 p.c. of the total in 1901 to 14·15 p.c. in 1921.

Asiatic immigration to Canada in the past twenty years has been responsible for the increase of the Asiatic population from 0·44 p.c. to 0·75 p.c. of the population. In the same period the population of Negro origin have declined from 0·32 p.c. to 0·21 p.c. of the total, and that of Indian origin from 2·38 p.c. to 1·26 p.c.

19.—Origins of the People According to the Censuses of 1871, 1881, 1901, 1911 and 1921.

Origin.	1871.	1881.	1901.	1911.	1921.
British—	No.	No.	No.	No.	No.
English	706,369	881,301	1,260,899	1,823,150	2,545,496
Irish	846,414	957,403	988,721	1,050,384	1,107,817
Scotch	549,946	699,863	800,154	997,880	1,173,637
Other	7,773	9,947	13,421	25,571	41,953
Total British	**2,110,502**	**2,548,514**	**3,063,195**	**3,896,985**	**4,868,903**
French	1,082,940	1,298,929	1,649,371	2,054,890	2,452,751
Austrian	–	–	10,947	42,535	107,671
Belgian	–	–	2,994	9,593	20,234
Bulgarian and Roumanian	–	–	354	5,875	15,235
Chinese	–	4,383	17,312	27,774	39,587
Czech (Bohemian and Moravian)	–	–	–	–	8,840
Dutch	29,662	30,412	33,845	54,986	117,814
Finnish	–	–	2,502	15,497	21,494
German	202,991	254,319	310,501	393,320	294,636
Greek	–	–	291	3,594	5,740
Hebrew	125	667	16,131	75,681	126,196
Hungarian	–	–	1,549	11,605	13,181
Indian	23,037	108,547	127,941[1]	105,492	110,596
Italian	1,035	1,849	10,834	45,411	66,769
Japanese	–	–	4,738	9,021	15,868
Negro	21,496	21,394	17,437	16,877	18,291
Polish	–	–	6,285	33,365	53,403
Russian	607	1,227	19,825	43,142	100,064
Scandinavian[2]	1,623	5,223	31,042	107,535	167,359
Serbo-Croatian	–	–	–	–	3,906
Swiss	2,962	4,588	3,865	6,625	12,837
Turkish	–	–	1,681	3,880	313
Ukranian—Bukovinian	–	–	[3]	9,960	1,616
Galician	–	–	5,682	35,158	24,456
Ruthenian	–	–	[4]	29,845	16,861
Ukranian	–	–	–	–	63,788
Various	1,220	3,952	1,454	20,652	18,915
Unspecified	7,561	40,806	31,539	147,345	21,249
Grand Total	**3,485,761**	**4,324,810**	**5,371,315**	**7,206,643**	**8,788,483**

20.—Proportion per cent which the People of Each Origin Form of the Total Population, 1871, 1881, 1901, 1911 and 1921.

Origin.	Number per cent of Population.				
	1871.	1881.	1901.	1911.	1921.
British—	p.c.	p.c.	p.c.	p.c.	p.c.
English	20·26	20·38	23·47	25·30	28·96
Irish	24·28	22·14	18·41	14·58	12·60
Scotch	15·78	16·18	14·90	13·85	13·36
Other	0·23	0·23	0·25	0·35	0·48
Total British	**60·55**	**58·93**	**57·03**	**54·08**	**55·40**
French	31·07	30·03	30·70	28·52	27·91
Austrian	–	–	0·20	0·59	1·23
Belgian	–	–	0·06	0·13	0·23
Bulgarian and Roumanian	–	–	0·01	0·08	0·17
Chinese	–	0·10	0·32	0·39	0·45
Czech (Bohemian and Moravian)	–	[2]	–	–	0·10
Dutch	0·85	0·70	0·63	0·76	1·34
Finnish	–	–	0·05	0·22	0·24
German	5·82	5·88	5·78	5·46	3·35
Greek	–	–	0·01	0·05	0·06
Hebrew	–	0·02	0·30	1·05	1·44
Hungarian	–	–	0·03	0·16	0·14
Indian	0·66	2·51	2·38	1·46	1·26
Italian	0·03	0·04	0·20	0·63	0·76
Japanese	–	–	0·09	0·13	0·18
Negro	0·62	0·50	0·32	0·23	0·21
Polish	–	–	0·12	0·46	0·61
Russian	0·02	0·03	0·37	0·60	1·14
Scandinavian	0·05	0·12	0·58	1·49	1·90
Serbo-Croatian	–	–	–	–	0·04
Swiss	0·08	0·11	0·07	0·09	0·15
Turkish	–	–	0·03	0·05	0·01
Ukranian—Bukovinian	–	–	–	0·14	0·02
Galician	–	–	0·11	0·49	0·28
Ruthenian	–	–	–	0·41	0·19
Ukranian	–	–	–	–	0·73
Various	0·03	0·09	0·03	0·29	0·22
Unspecified	0·22	0·94	0·58	2·04	0·24
Total	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**

NOTE.—Origins were not taken in 1891. [1]Includes "half-breeds". [2]Includes Danish, Icelandic, Norwegian and Swedish; in 1921 they were respectively 21,124, 15,876, 68,856 and 61,503. [3]Included with Austrians. [4]Included with Galicians.

21.—Racial Origin of the Population, by Provinces and Territories, 1921.

No.	Origins.	P. E. Island.	Nova Scotia.	New Brunswick.	Quebec.
	Population.....Total	**88,615**	**523,837**	**387,876**	**2,361,199**
1	*British*.....	*75,627*	*407,618*	*253,002*	*357,108*
2	English[1].....	23,313	202,106	131,664	196,982
3	Irish[1].....	18,743	55,712	68,670	94,947
4	Scotch[1].....	33,437	148,000	51,308	63,915
5	Other[1].....	134	1,800	1,360	1,264
6	French[1].....	11,971	56,619	121,111	1,889,277
7	Austrian.....	2	682	80	1,901
8	Belgian.....	2	841	212	3,284
9	Chinese.....	14	315	185	2,335
10	Czech (Bohemian and Moravian).....	–	229	7	82
11	Danish[1].....	17	352	976	595
12	Dutch.....	239	11,506	3,638	1,413
13	Finnish.....	1	45	35	76
14	German.....	260	27,046	1,698	4,668
15	Greek.....	3	150	54	1,780
16	Hebrew.....	21	2,161	1,243	47,977
17	Hungarian.....	–	180	6	89
18	Icelandic.....	1	9	–	11
19	Indian.....	235	2,048	1,331	11,566
20	Italian.....	26	1,620	367	16,141
21	Japanese.....	–	3	3	32
22	Negro.....	43	6,175	1,190	1,046
23	Norwegian.....	10	482	588	705
24	Polish.....	–	980	65	3,264
25	Roumanian.....	–	111	11	1,371
26	Russian.....	1	520	185	2,802
27	*Serbo-Croatian*.....	–	*107*	*11*	*67*
28	Albanian.....	–	–	–	–
29	Croatian.....	–	–	–	–
30	Jugo-Slavic.....	–	106	7	64
31	Montenegrin.....	–	–	2	–
32	Serbian.....	–	1	2	3
33	Slovenian.....	–	–	–	–
34	Swedish.....	6	490	578	908
35	Swiss.....	7	833	31	764
36	Syrian.....	83	1,140	594	2,570
37	*Ukranian*.....	–	*389*	*3*	*1,176*
38	Bukovinian.....	–	–	–	7
39	Galician.....	–	88	2	386
40	Ruthenian.....	–	44	1	47
41	Ukranian.....	–	257	–	736
42	Unspecified[1].....	44	519	534	6,066
43	*Various*.....	*2*	*667*	*138*	*2,125*
44	Arabian.....	–	20	7	42
45	Armenian.....	1	4	–	119
46	Brazilian.....	–	–	–	1
47	Bulgarian.....	–	27	25	78
48	Chilian.....	–	–	4	–
49	Egyptian.....	–	–	–	16
50	Eskimo.....	–	–	–	27
51	Hawaiian.....	–	–	–	–
52	Hindu.....	–	–	1	11
53	Jamaican.....	–	–	–	–
54	Laplander.....	–	–	–	–
55	Lettish.....	–	2	–	20
56	Lithuanian.....	–	168	–	1,209
57	Maltese.....	–	12	–	30
58	Mexican.....	–	3	–	8
59	Persian.....	–	–	–	3
60	Portuguese.....	–	167	35	51
61	Spanish.....	1	246	49	402
62	Turkish.....	–	17	17	106
63	Other.....	–	1	–	2

[1] Totals for Canada include personnel of Royal Canadian Navy.

21.—Racial Origin of the Population, by Provinces and Territories, 1921.

Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.	Yukon.	Northwest Territories.	Canada.	No.
2,933,662	**610,118**	**757,510**	**588,454**	**524,582**	**4,157**	**7,988**	**8,788,483**	
2,282,015	*350,992*	*400,416*	*351,820*	*387,513*	*1,847*	*473*	*4,868,903*	1
1,211,660	170,286	206,472	180,478	221,145	769	234	2,545,496	2
590,493	71,414	84,786	68,246	54,298	369	106	1,107,817	3
465,400	105,034	104,678	96,062	104,965	662	130	1,173,637	4
14,462	4,258	4,480	7,034	7,105	47	3	41,953	5
248,275	40,638	42,152	30,913	11,246	284	258	2,452,751	6
11,790	31,035	39,738	19,430	2,993	20	–	107,671	7
3,175	5,320	3,477	2,590	1,324	7	2	20,234	8
5,625	1,331	2,667	3,581	23,533	1	–	39,587	9
1,336	1,028	2,574	2,537	1,040	7	–	8,840	10
2,450	3,429	4,287	6,772	2,191	37	17	21,124	11
50,512	20,728	16,639	9,490	3,306	34	1	117,506	12
12,835	506	1,937	2,926	3,112	21	–	21,494	13
130,545	19,444	68,202	35,333	7,273	155	12	294,636	14
2,078	257	363	350	703	2	–	5,740	15
47,798	16,669	5,380	3,242	1,696	8	1	126,196	16
1,737	828	8,946	1,045	343	7	–	13,181	17
137	11,043	3,593	507	575	–	–	15,876	18
26,654	13,869	12,914	14,557	22,377	1,390	3,873	110,814	19
33,355	1,933	689	4,028	8,587	22	1	66,769	20
161	53	109	473	15,006	28	–	15,868	21
7,220	491	396	1,048	676	6	–	18,291	22
3,416	4,203	31,438	21,323	6,570	107	14	68,856	23
15,787	16,594	8,161	7,172	1,361	19	–	53,403	24
3,120	919	5,645	2,017	276	–	–	13,470	25
8,605	14,009	45,343	21,212	7,373	7	7	100,064	26
1,249	*111*	*827*	*802*	*695*	*11*	*26*	*3,906*	27
41	1	1	–	–	–	–	43	28
19	–	–	–	1	–	–	20	29
1,044	102	816	792	656	11	26	3,624	30
–	–	–	–	3	–	–	5	31
138	8	10	6	25	–	–	193	32
7	–	–	4	10	–	–	21	33
6,713	8,023	19,064	15,943	9,666	109	3	61,503	34
5,014	897	1,823	2,468	983	12	5	12,837	35
2,709	310	466	198	211	1	–	8,282	36
8,807	*44,129*	*28,097*	*23,827*	*793*	–	–	*105,721*	37
179	192	1,209	28	1	–	–	1,616	38
2,748	10,288	6,598	3,930	416	–	–	24,456	39
806	7,987	3,327	4,618	31	–	–	16,861	40
4,574	25,662	16,963	15,251	345	–	–	63,788	41
7,636	891	1,787	2,254	1,454	6	53	21,249	42
3,408	*438*	*380*	*596*	*1,706*	*9*	*3,242*	*12,711*	43
19	4	4	2	–	–	–	98	44
508	4	8	8	13	–	–	665	45
7	–	–	–	1	–	–	9	46
1,378	40	87	80	50	–	–	1,765	47
1	–	–	–	29	–	–	34	48
11	–	–	2	–	–	–	29	49
–	–	–	–	–	–	3,242	3,269	50
2	–	–	–	20	–	–	22	51
28	8	6	10	951	1	–	1,016	52
8	–	–	–	–	–	–	8	53
–	–	6	–	1	1	–	8	54
35	111	34	156	23	–	–	381	55
309	45	84	94	60	1	–	1,970	56
217	17	–	1	2	–	–	279	57
10	5	7	15	22	–	–	70	58
29	–	34	–	14	–	–	80	59
47	13	2	44	106	2	–	467	60
704	186	67	156	395	2	–	2,208	61
91	5	38	28	10	1	–	313	62
4	–	3	–	9	1	–	20	63

22.—Racial Origins of the People for Nine Cities of 60,000 and over, as shown by the Census of 1921.

Origins.	Montreal.	Toronto.	Winnipeg.	Vancouver.	Hamilton.	Ottawa.	Quebec.	Calgary.	London.
British—									
English	88,014	260,860	58,321	49,931	56,984	25,907	3,728	27,425	34,378
Irish	34,484	97,361	23,315	14,126	16,845	27,551	4,075	9,082	10,806
Scotch	25,672	83,620	37,069	27,878	20,263	14,434	822	15,599	9,789
Other	460	3,389	1,864	1,674	1,005	323	10	843	539
Total British	**148,630**	**445,230**	**120,569**	**93,609**	**95,097**	**68,215**	**8,635**	**52,949**	**55,512**
French	390,168	8,350	3,944	2,252	1,956	30,442	85,350	1,408	759
Austrian	1,223	1,165	6,785	271	872	222	7	435	84
Belgian	1,941	215	284	228	15	93	71	91	19
Chinese	1,735	2,134	814	6,484	374	282	98	688	238
Czech (Bohemian and Moravian)	66	72	305	72	78	25	9	26	3
Dutch	432	3,961	1,236	738	1,615	402	10	628	624
Finnish	8	735	70	301	19	8	–	22	1
German	1,520	4,689	4,762	1,117	2,944	2,005	94	876	1,234
Greek	1,446	812	139	328	125	97	73	68	61
Hebrew	42,717	34,619	14,449	1,270	2,560	2,799	375	1,247	703
Hungarian	67	59	344	25	200	2	3	14	2
Indian	156	183	44	59	219	44	12	22	58
Italian	13,922	8,217	1,311	1,590	3,268	1,124	156	425	582
Japanese	15	42	35	4,246	–	9	–	41	4
Negro	862	1,236	424	324	375	38	14	66	209
Polish	1,427	2,380	5,696	174	1,478	172	7	287	173
Rumanian	1,026	256	389	34	435	207	1	97	9
Russian	2,067	1,332	3,791	357	950	133	5	1,973	115
Scandinavian	977	1,109	6,147	2,660	467	371	37	1,098	179
Serbo-Croatian	59	163	53	127	157	–	1	12	3
Swiss	428	583	278	154	122	79	18	154	53
Syrian	1,499	387	156	94	9	152	64	18	76
Ukranian—									
Bukovinian	–	16	6	–	–	15	–	–	7
Galician	327	365	2,013	76	120	69	–	57	6
Ruthenian	34	116	1,549	–	145	26	–	4	–
Ukranian	690	652	2,813	31	105	100	–	92	7
Various	1,623	1,333	159	350	281	37	15	24	33
Unspecified	2,341	1,472	422	246	165	675	138	208	221
Grand total	**618,506**	**521,893**	**179,087**	**117,217**	**114,151**	**107,843**	**95,193**	**63,305**	**60,959**

7.—Religions.

The religions of the people of Canada have been recorded at each of the censuses taken since 1871, the instruction book issued to the enumerators at the census of 1921 stating that the religion of each person shall be recorded, specifying the denomination, sect or community to which the person belongs or adheres, or which he or she favours. The number of persons stating their preference for each of the principal religious bodies at each of the censuses is given in Table **23**, while percentage figures are presented in Table **24**.

In recent years there will be noted certain changes in the religious distribution of the population, corresponding in a considerable degree to the changes in racial origin noted above. For example, contemporaneously with the increase in the percentage of persons of English race during the past 20 years, there has taken place an increase in the Anglicans from 12·69 p.c. of the population in 1901 to 16·02 p.c. in 1921. The Presbyterians, to some extent as a result of Scottish immigration, have also increased from 15·68 p.c. of the total population in 1901 to 16·03 p.c. in 1921. Further, synchronizing with increasing immigration from continental Europe, the Lutherans have increased in the same period from 1·72 to 3·28 p.c., the Greek Church from 0·29 p.c. to 1·93 p.c. and the Jews from 0·31 to 1·42 p.c., while increasing Asiatic immigration is reflected in the growth of the adherents of Eastern religions from 0·29 p.c. to 0·46 p.c.

Of the total population of 1921 (8,788,483) 8,572,516, or 97·6 p.c., are classified as belonging to some Christian denomination or sect; 173,143 or 1·9 p.c. as

non-Christian, this figure including 125,190 Jews, 40,727 of Oriental religions and 7,226 Pagans, leaving less than 0·5 p.c. otherwise reported.

In Table 25 are given for Canada and for the provinces, the number of persons accredited to each of 64 specified religions, as well as (in a footnote) the totals for Canada for 57 others. In addition there were 119 sects enumerated, each with fewer than 10 adherents. Thus altogether 240 distinct sects or denominations are reported as compared with 203 in 1911 and 157 in 1901.

23.—Religions of the People at each Decennial Census, 1871-1921.

Religions.	1871.	1881.	1891.	1901.	1911.	1921.
Adventists	6,179	7,211	6,354	8,058	10,406	12,215
Agnostics	–	–	–	3,613	3,110	594
Anglicans	494,049	574,818	646,059	681,494	1,043,017	1,407,959
Baptists[1]	239,343	296,525	303,839	318,005	382,720	421,730
Brethren	2,305	8,831	11,637	8,014	9,278	11,626
Buddhists	–	–	–	10,407	10,012	11,288
Christians	–	–	–	7,484	17,264	12,559
Christian Science	–	–	–	2,619	5,073	13,826
Confucians	–	–	–	5,115	14,562	27,319
Congregationalists	21,829	26,900	28,157	28,293	34,054	30,574
Disciples of Christ	–	20,193	12,763	14,900	11,329	9,371
Doukhobors	–	–	–	8,775	10,493	12,658
Evangelical Association	4,701	–	–	10,193	10,595	13,908
Friends (Quaker)	7,345	6,553	4,650	4,100	4,027	3,149
Greek Church	18	–	–	15,630	88,507	169,822
Jews	1,115	2,396	6,414	16,401	74,564	125,190
Lutherans	37,935	46,350	63,982	92,524	229,864	287,484
Mennonites (inc. Hutterites)	–	21,234	–	31,797	44,625	58,797
Methodists	567,091	742,981	847,765	916,886	1,079,993	1,158,744
Mormons	534	–	–	6,891	15,971	19,656
No Religion	5,146	2,634	–	4,810	26,027	21,738
Pagans	1,886	4,478	–	15,107	11,840	7,226
Plymouth Brethren	2,229	–	–	3,040	3,438	6,482
Presbyterians	544,998	676,165	755,326	842,531	1,116,071	1,408,812
Protestants	10,146	6,519	12,253	11,612	30,265	36,350
Roman Catholics	1,492,029	1,791,982	1,992,017	2,229,600	2,833,041	3,383,663
Salvation Army	–	–	13,949	10,308	18,834	24,763
Union Church	–	–	–	29	633	8,728
Unitarians	2,275	2,126	1,777	1,934	3,224	4,925
Other sects	27,553	20,145	36,942	17,923	31,316	57,976
Not given	17,055	86,769	89,355	43,222	32,490	19,351
Total	**3,485,761**	**4,324,810**	**4,833,239**	**5,371,315**	**7,206,643**	**8,788,483**

[1]Including Tunkers.

24.—Ratio per cent of Specified Denominations to Total Population in Census Years.

Denominations.	1871.	1881.	1891.	1901.	1911.	1921.
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Adventists	0·18	0·17	0·13	0·15	0·14	0·16
Anglicans	14·17	13·35	13·37	12·69	14·47	16·02
Baptists	6·87	6·86	6·29	5·92	5·31	4·80
Christians	–	–	–	0·13	0·23	0·14
Congregationalists	0·63	0·62	0·58	0·53	0·47	0·35
Disciples	–	0·47	0·26	0·28	0·16	0·11
Eastern religions[1]	–	–	–	0·29	0·39	0·46
Evangelicals	0·13	–	–	0·19	0·15	0·16
Greek Church	–	–	–	0·29	1·23	1·93
Jews	0·03	0·60	0·13	0·31	1·03	1·42
Lutherans	1·09	1·06	1·32	1·72	3·19	3·28
Mennonites[2]	–	–	–	0·59	0·62	0·67
Methodists	16·27	17·11	17·54	17·07	14·98	13·18
Mormons	0·02	–	–	0·13	0·22	0·22
No Religion	0·15	–	–	0·09	0·36	0·25
Pagans	0·05	0·10	0·56	0·28	0·16	0·08
Presbyterians	15·63	15·64	15·63	15·68	15·48	16·03
Protestants	0·29	0·15	0·25	0·22	0·42	0·41
Roman Catholics	42·80	41·43	41·21	41·51	39·31	38·50
Salvation Army	–	–	0·29	0·19	0·26	0·28
All others	1·20	0·37	0·59	0·94	0·95	1·32
Unspecified	0·49	2·07	1·85	0·80	0·47	0·23
Total	**100·09**	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**

[1] Eastern Religions include Confucians, Buddhists, Mohammedans, Shintos, Sikhs, Hindus.
[2] Included with Baptists in 1891.

25.—Religions of the People by

No.	Religions.	Prince Edward Island.	Nova Scotia.	New Brunswick.	Quebec.
	Population Total	**88,615**	**523,837**	**387,876**	**2,361,199**
1	Adventists	14	1,240	956	1,656
2	Agnostics	1	20	1	27
3	Anglicans	5,057	85,604	47,020	121,932
4	Apostolic Brethren	–	5	4	10
5	Atheists	1	7	23	40
6	Baptists	5,316	86,833	86,254	9,256
7	Believers	–	–	–	–
8	Brethren	4	192	270	651
9	Buddhists	–	7	–	87
10	Catholic Apostolic	–	–	–	13
11	Christadelphians	–	7	25	21
12	Christian Alliance	–	–	–	–
13	Christian Church	123	83	51	21
14	Christian Reform	–	–	–	–
15	Christians	475	1,003	596	182
16	Christian Science	3	224	152	427
17	Church of Christ	24	117	206	24
18	Church of God (New Dunker)	12	87	–	12
19	Confucians	9	78	57	1,314
20	Congregationalists	8	2,372	559	4,715
21	Deist	–	1	1	8
22	Disciples of Christ	426	746	911	7
23	Doukhobors	–	–	–	1
24	Dutch Reform	–	4	–	4
25	Evangelical Association	–	33	56	96
26	Free Thinkers	1	28	4	111
27	Friends	–	27	7	17
28	Gospel People	29	3	16	–
29	Greek Church	5	950	116	5,961
30	Holiness Movement	–	74	28	236
31	International Bible Students Association	16	460	98	53
32	Independents	–	–	–	–
33	Jews	18	1,974	1,213	47,759
34	Labor Church	–	–	–	–
35	Lutherans	–	8,077	378	2,209
36	Mennonites (inc. Hutterites)	3	2	4	6
37	Methodists	11,408	59,065	34,872	41,884
38	Mission	–	40	–	10
39	Mohammedans	–	40	10	31
40	Moravians	–	–	–	–
41	Mormons	8	46	7	59
42	New Thought	–	–	–	–
43	Non-Conformists	6	1	–	29
44	Non-Sectarian	13	18	8	35
45	No Religion	75	555	228	979
46	Pagans	1	7	68	286
47	Pentecostal	25	76	218	374
48	Peoples Church	5	–	–	–
49	Plymouth Brethren	–	121	110	337
50	Presbyterians	25,945	109,860	41,211	73,445
51	Protestants	35	165	423	18,620
52	Reformed Church	–	–	7	9
53	Roman Catholics	39,312	160,802	170,319	2,019,518
54	Salvation Army	108	2,071	736	658
55	Sikhs and Hindus	–	–	–	11
56	Shintos	–	–	–	–
57	Spiritualists	2	7	2	99
58	Swedenborgian (New Church)	–	18	2	6
59	Theosophists	–	–	–	14
60	Undenominationalists	–	–	14	1
61	Union Church	–	5	–	38
62	Unitarian	17	89	46	676
63	United Brethren in Christ	–	19	1	6
64	Universalists	1	114	94	378
65	Various sects[1]	24	42	41	150
66	Not Given	85	418	453	6,690

Totals for Canada include personnel of Royal Canadian Navy.

[1]Various sects comprise 25 Armenian, 25 Assembly, 12 Bahais, 17 Big Church, 17 Body of Christ, 71 Brotherhood, 10 Brother of Man, 95 Carmelite, 19 Children of God, 27 Church Community, 95 Church of First Born, 16 Christ's Church of China, 76 Communist, 45 Daniel's Band, 34 Dissenters, 12 Esoteric Law, 11 First Christ Church, 138 Followers of Christ, 33 Followers of Jesus, 37 Golden Rule, 17 Holy Cross, 58 Holy Roller, 39 Holy Worker, 23 Interdenominational, 74 Jesus Way, 18 Liberal, 72 Lith. Nat. Cath

Provinces, Census 1921.

Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.	Yukon.	Northwest Territories.	Canada.	No.
2,933,662	**610,118**	**757,510**	**588,454**	**524,582**	**4,157**	**7,988**	**8,788,483**	
1,998	578	2,893	3,533	1,347	–	–	14,215	1
65	52	44	111	273	–	–	594	2
648,883	121,309	116,224	98,395	160,978	1,582	648	1,407,959	3
137	295	135	24	238	–	–	848	4
132	113	68	269	388	–	–	1,041	5
148,634	13,652	23,696	27,829	20,158	85	10	421,730	6
178	11	86	21	17	–	–	313	7
6,442	625	1,159	1,103	1,180	–	–	11,626	8
114	19	97	393	10,559	12	–	11,288	9
150	16	26	5	61	–	–	271	10
1,151	105	71	88	342	–	–	1,810	11
279	–	4	–	–	–	–	283	12
1,266	371	644	1,438	226	–	–	4,223	13
1	45	65	242	–	–	–	353	14
4,754	281	2,030	2,298	940	–	–	12,559	15
5,032	1,361	925	1,932	3,711	59	–	13,826	16
1,036	625	745	777	186	–	–	3,740	17
613	65	327	595	70	–	–	1,781	18
2,113	691	1,128	2,266	19,663	–	–	27,319	19
12,218	2,395	2,555	3,228	2,513	3	6	30,574	20
448	2	–	10	7	–	–	477	21
6,460	302	223	197	99	–	–	9,371	22
17	84	7,176	306	5,074	–	–	12,658	23
15	110	127	680	39	–	–	979	24
10,311	220	1,489	1,626	76	–	–	13,908	25
180	79	126	197	388	12	–	1,126	26
1,987	109	411	309	281	1	–	3,149	27
2,140	54	90	65	52	–	–	2,449	28
20,509	56,670	47,171	35,815	2,612	13	–	166,822	29
2,233	162	380	160	60	–	–	3,333	30
2,655	756	800	627	1,213	–	–	6,678	31
171	79	55	18	19	–	–	342	32
47,458	16,593	5,328	3,186	1,654	6	1	125,190	33
6	764	21	38	1	–	–	830	34
66,863	39,472	91,988	60,573	17,659	254	11	287,484	35
13,645	21,295	20,544	3,125	172	–	1	58,797	36
685,406	71,200	100,851	89,070	64,810	117	18	1,158,744	37
490	120	533	451	116	–	–	1,763	38
77	31	144	63	82	–	–	478	39
29	–	42	648	22	–	–	741	40
5,789	331	1,440	11,373	600	3	–	19,656	41
15	–	7	4	232	–	–	258	42
125	109	47	82	217	–	–	616	43
194	79	149	182	229	–	–	907	44
3,231	1,491	2,610	5,089	7,149	295	36	21,738	45
2,635	599	1,556	479	610	–	985	7,226	46
2,713	1,228	1,075	1,048	246	–	–	7,003	47
5	87	–	9	2	–	–	108	48
3,370	613	438	426	1,067	–	–	6,482	49
613,429	138,201	162,165	120,868	123,022	579	45	1,408,812	50
4,312	2,697	3,250	3,252	3,389	207	–	36,350	51
33	111	374	781	27	–	1	1,343	52
575,266	105,394	147,292	97,178	63,980	699	3,849	3,383,663	53
13,746	2,027	1,552	1,773	2,086	–	–	24,763	54
3	3	3	10	819	–	–	849	55
3	–	1	6	417	–	–	427	56
763	128	26	210	319	–	–	1,558	57
727	75	236	43	36	–	–	1,143	58
168	16	5	28	135	–	–	366	59
209	172	80	47	54	–	–	577	60
1,817	3,348	2,891	579	50	–	–	8,728	61
1,082	1,541	337	570	544	3	20	4,925	62
1,872	43	301	1,012	74	–	–	3,328	63
317	21	63	76	30	–	–	1,094	64
844	363	315	460	299	2	–	2,540	65
4,698	730	876	1,155	1,663	225	2,357	19,351	66

Church, 13 Lot of Jesus, 34 Materialist, 64 Messiah. 16 Metropolitan, 27 Nationalist, 29 Philosophist, 30 Polish Church, 24 Provestory, 56 Rationalist, 15 Rosecrucian, 30 Round Church, 21 Sabbath Keeper, 134 Saints, 12 Saved by Grace, 13 Schismatic, 37 Sectarist, 61 Serbian Church, 76 Shiloite, 50 Socialists, 25 Solomon Reformists, 34 Swiss Ch., 27 Taoist, 16 Temple of God, 15 Temple Society, 12 Testimony of Jesus, 33 Truth, 32 Ukranian Catholic, 11 Workers, 21 Zion Chapel, 92 Zionist—together with 364 of 119 other sects each of which numbers fewer than 10 adherents.

8.—Birthplaces.

The nativity of the population of Canada, as at each of the six censuses, is shown by Canadian-born, British-born, United States-born and other foreign-born in Table **26.** The table shows that in 1871, 97·22 p.c. of the population were born under the British flag, while half a century later the percentage had declined to 89·87 p.c. Among these, the Canadian-born population was at its maximum percentage in 1901, with 86·98 p.c. of the total, while in 1921 that percentage is at its minimum, 77·75 p.c. As a consequence of the large immigration from the United Kingdom in the first two decades of the century, the British-born population has increased from 7·83 p.c. in 1901 to 12·12 p.c. in 1921.

The foreign-born population has been divided into United States-born and other foreign-born. Worthy of note is the fairly steady increase of the United States-born population from 1·85 p.c. in 1871 to 4·26 p.c. in 1921. Other foreign-born increased from 0·93 p.c. in 1871 to 6·25 p.c. in 1911, but have declined slightly to 5·87 p.c. of the total population in 1921.

The nativity of the 1921 population is indicated by sex in Table **27,** for the various provinces and territories. In the Maritime Provinces, the population is shown by the census to be about 93 p.c. native-born, and in Quebec about 92 p.c. In Ontario, however, the proportion sinks to about 78 p.c., in Manitoba to about 63 p.c., in Saskatchewan to about 64 p.c., in Alberta to about 53 p.c., and in British Columbia to barely over 50 p.c.

About 40 p.c. of the total British-born population is in Ontario, while the British-born element bears the greatest proportion to the total in British Columbia, viz., 30·6 p.c. The foreign-born element reaches its maximum percentage in the rapidly growing provinces of Saskatchewan and Alberta—where it constitutes 26·3 p.c. and 29·5 p.c. of the total population respectively.

26.—Birthplaces of the Population of Canada according to the Censuses of 1871-1921.

Year.	Canadian Born.	British Born.	Foreign Born.		Total Population.	Proportion to Total Population.			
						Canadian Born.	British Born.	Foreign Born.	
			Born in United States.	Born in other Foreign Countries.				United States Born.	Other Foreign Born.
	No.	No.	No.	No.	No.	p.c.	p.c.	p.c.	p.c.
1871....	2,892,358	496,477	64,447	32,479	3,485,761	82·98	14·24	1·85	0·93
1881....	3,715,492	478,235	77,753	53,330	4,324,810	85·91	11·06	1·80	1·23
1891....	4,185,877	490,232	80,915	76,215	4,833,239	86·61	10·14	1·67	1·58
1901....	4,671,815	420,712	127,899	150,889	5,371,315	86·98	7·83	2·38	2·81
1911....	5,619,682	833,422	303,680	449,859	7,206,643	77·98	11·56	4·21	6·25
1921....	6,832,747	1,065,454	374,010	516,272	8,788,483	77·75	12·12	4·26	5·87

27.—Population Classified by Sex and Nativity, by Provinces and Territories, according to the Census of 1921.

Provinces and Territories.	Total.			Canadian Born.		British Born.		Foreign Born.	
	Male.	Female.	Both Sexes.	Male.	Female.	Male.	Female.	Male.	Female.
P. E. Island....	44,887	43,728	88,615	43,702	42,548	509	565	676	615
Nova Scotia....	266,472	257,365	523,837	243,181	237,151	15,445	14,074	7,846	6,140
New Brunswick	197,351	190,525	387,876	186,417	180,001	5,495	5,214	5,439	5,310
Quebec.....	1,180,028	1,181,171	2,361,199	1,082,483	1,090,140	44,830	45,034	52,715	45,997
Ontario.....	1,481,890	1,451,772	2,933,662	1,139,262	1,152,717	237,220	222,357	105,408	76,698
Manitoba.....	320,567	289,551	610,118	198,284	189,462	61,651	51,463	60,632	48,626
Saskatchewan..	413,700	343,810	757,510	241,557	216,276	57,430	42,925	114,713	84,609
Alberta.....	324,208	264,246	588,454	166,176	148,914	55,724	43,668	102,308	71,664
British Columbia.....	293,409	231,173	524,582	136,758	127,288	87,769	72,983	68,882	30,902
Yukon Territ'y.	2,819	1,338	4,157	1,583	1,017	486	86	750	235
N. W. Territories.....	4,129	3,859	7,988	3,951	3,830	80	13	98	16
Royal Canadian Navy.....	485	–	485	49	–	433	–	3	–
Canada—1921..	**4,529,945**	**4,258,538**	**8,788,483**	**3,443,403**	**3,389,344**	**567,072**	**498,382**	**519,470**	**370,812**
" 1911..	3,821,995	3,384,648	7,206,643	2,849,442	2,770,240	501,138	332,284	471,415	282,124

9.—Rural and Urban Population.

In Table 28 are given statistics showing the growth of rural and urban population respectively since 1891. For the purposes of the census, the population residing in cities, towns and incorporated villages has been defined as urban, and that outside of such localities as rural. Thus the distinction here made between "rural" and "urban" population is a distinction of provincial legal status rather than of size of aggregations of population within limited areas. Since the laws of the various provinces differ in regard to the population necessary before a municipality may be incorporated as urban (the laws of Saskatchewan, for example, making provision that 50 people actually resident on an area not greater than 640 acres may claim incorporation as a village, while the Ontario law now requires that villages asking for incorporation shall have a population of 750 on an area not exceeding 500 acres), the line of demarcation between rural and urban population is not uniformly drawn throughout the Dominion, as far as comparable aggregations of population are concerned. To a limited extent, however, Table 30 will permit the student of population statistics to make, at least for Canada as a whole, his own line of demarcation between rural and urban population.[1]

[1] In the United States, urban population is classified by the Census Bureau as that residing in cities and other incorporated places having 2,500 inhabitants or more, and in "towns" having 2,500 inhabitants or more in Massachusetts, New Hampshire and Rhode Island. While such "towns", under the forms of local government existing in these states are partly rural in character, the United States Census Bureau considers that the total urban population of these states is not greatly exaggerated thereby.

While a summary comparison between urbanization in Canada in 1921 and in the United States in 1920 would lead us to the conclusion that our country, though far less densely peopled than the United States, had an almost equally large percentage of its population in urban communities, viz., 49·52 per cent in Canada as compared with 51·4 per cent in the United States, the fact that in the United States inhabitants of places having under 2,500 population are included with rural population, while in Canada the inhabitants of many places with less than 100 population are classed as urban, must be taken into account. A fairer basis of comparison is secured if the same population limits are taken for both countries, as may be done by using Table **30.** Thus, at the census of 1920, the United States had 25·9 p.c. of its population resident in cities of 100,000 and over, while Canada in 1921 had only 18·87 p.c. of its population in such places. The United States had an additional 16·4 p.c. of its population residing in cities of between 10,000 and 100,000 population, and 4·7 p.c. in cities and towns of 5,000 to 10,000, while Canada had in cities of these categories only 13·32 p.c., and 4·36 p.c. respectively of its population. Thus, taking all places of 5,000 and over—the lowest population for which comparative figures are readily available—47 p.c. of the population of the United States resided in such places as compared with 36·55 p.c. of the population of Canada, showing the much higher degree of urbanization which has been reached in the United States—a natural thing in an older settled and more densely peopled country.

On the basis of the census classification, it is apparent from Table **28** that in the last decade, as in the previous one, urban communities absorbed somewhat over two-thirds of the total increase in population, with the result that the urban population of Canada was in 1921 nearly equal to the rural. Out of every 1,000 persons in the country, 505 were resident, on June 1, 1921, in rural and 495 in urban communities, as compared with 545 in rural and 455 in urban communities on June 1, 1911, 625 in rural and 375 in urban communities in 1901, and 682 in rural and 318 in urban communities in 1891.

From Table **30**, showing the distribution of urban population in Canada by size of cities and towns, it becomes evident that for the first time in its census history Canada possesses cities of more than half a million population. These are Montreal and Toronto, with 618,506 and 521,893 inhabitants respectively, the former having in its neighbourhood several "satellite" cities, Verdun, Westmount, Lachine, Outremont, which, with other smaller towns in its vicinity, bring the population of "Greater Montreal" to the 700,000 mark. No other city has attained the 200,000 mark, but during the past decade Hamilton and Ottawa have been added to Winnipeg and Vancouver as cities of over 100,000 population, while Quebec, which in 1911 was, together with Hamilton and Ottawa, in the 50,000 to 100,000 class, has been joined in that class, though at a considerable interval, by Calgary, London, Edmonton and Halifax. Details of the population of these and other smaller cities and towns of 5,000 and over, are given by censuses from 1871 to 1921 in Table **32,** while the populations of urban communities having a population of from 1,000 to 5,000 in 1921 are given for 1901, 1911 and 1921 in Table **33.**

28.—Rural and Urban Population by Provinces and Territories, 1891, 1901, 1911 and 1921.

Provinces.	1891.		1901.	
	Rural.	Urban.	Rural.	Urban.
Prince Edward Island	94,823	14,255	88,304	14,955
Nova Scotia	373,403	76,993	330,191	129,383
New Brunswick	272,362	43,901	253,835	77,285
Quebec	988,820	499,715	994,833[8]	654,065[8]
Ontario	1,295,323	818,998	1,246,969	935,978
Manitoba	111,498	41,008	184,775[3]	70,436[3]
Saskatchewan	–[1]	–	77,013[9]	14,266[9]
Alberta	–[1]	–	54,489[2]	18,533[2]
British Columbia	60,945	37,228	88,478	90,179
Yukon Territory	–[1]	–	18,077	9,142
Northwest Territories	–[1]	–	20,129	–
Royal Canadian Navy	–	–	–	–
Canada	**3,296,141**	**1,537,098**	**3,357,093**	**2,014,222**

Provinces.	1911.		1921.		Numerical increase in decade 1911-21.	
	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.
Prince Edward Island	78,758	14,970	69,522	19,093	−9,236	4,123
Nova Scotia	306,210	186,128	296,799[6]	227,038[6]	−9,411	40,910
New Brunswick	252,342	99,547	263,432[5]	124,444[5]	11,090	24,897
Quebec	1,038,934[8]	966,842[8]	1,038,630	1,322,569	− 304	355,727
Ontario	1,198,803[7]	1,328,489	1,226,379	1,707,283	27,576	378,794
Manitoba	261,029[4]	200,365	348,502	261,616	87,473	61,251
Saskatchewan	361,037[9]	131,395[9]	538,552	218,958	177,515	87,563
Alberta	236,633[2]	137,662[2]	365,550	222,904	128,917	85,242
British Columbia	188,796	203,684	277,020	247,562	88,224	43,878
Yukon Territory	4,647	3,865	3,182	975	−1,465	−2,890
Northwest Territories	6,507[10]	–	7,988	–	1,481	–
Royal Canadian Navy	–	–	485	–	485	–
Canada	**3,933,696**	**3,272,947**	**4,436,041**	**4,352,442**	**502,345**	**1,079,495**

[1] The population (98,167) in territory now comprised in the provinces of Alberta, Saskatchewan and in the Yukon and Northwest Territories was classified as rural in the Census of 1891. [2] Volume I, Census 1911, places the urban population of Alberta for that year at 141,937. Included in this figure was the population (5,250) of twelve places which, according to the Report of the Municipal Commissioner for Alberta, were not then incorporated. The places so included were Aetna, Bankhead, Bellevue, Bickerdike, Canmore, Cardiff, Exshaw, Hillcrest, Passburg, Queenston and Elmpark. The correction resulting from this and from other small adjustments consequent upon more definite knowledge as to incorporated areas, places the urban population for 1911 at 137,662. Similar corrections have been made in the urban and rural figures for the Census of 1901. [3] As corrected in Census Report, Prairie Provinces, 1916. [4] As changed by Extension of Boundaries Act, 1912. [5] Corrected by information received since Bulletin 1 was printed, which transferred population of Shediac and Hampton to urban column and population of Salisbury to rural. [6] Corrected by information received since Bulletin 2 was printed, giving Clark's Harbour as an incorporated town. [7] As changed by Extension of Boundaries Act, 1912. [8] The urban population of 970,791 shown in Volume 1, Census 1911, is reduced to 966,842 by the transfer of the population of Maniwaki, Martinville, Moisie, St. Bruno, St. Martin and St. Vincent de Paul from urban to rural; by adjustments in area of the villages of Ste. Anne and Ste. Geneviève; and Extension of Boundaries Act, 1912. [9] Urban and rural population for 1911 and 1901 are as corrected in Census Report, Prairie Provinces, 1916. [10] As reduced by Extension of Boundaries Act, 1912.

29.—Percentage Distribution of Rural and Urban Population by Provinces and Territories, 1891, 1901, 1911 and 1921.

Provinces.	1891.		1901.	
	Rural.	Urban.	Rural.	Urban.
Prince Edward Island	86·93	13·07	85·52	14·48
Nova Scotia	82·91	17·09	71·85	28·15
New Brunswick	84·78	15·22	76·66	23·34
Quebec	66·43	33·57	60·33	39·67
Ontario	61·26	38·74	57·12	42·88
Manitoba	73·11	26·89	72·40	27·60
Saskatchewan	–[1]	–	84·37	15·63
Alberta	–[1]	–	74·62	25·38
British Columbia	62·08	37·92	49·52	50·48
Yukon Territory	–[1]	–	66·41	33·59
Northwest Territories	–[1]	–	100·00	–
Royal Canadian Navy	–	–	–	–
Canada	**68·20**	**31·80**	**62·50**	**37·50**

Provinces	1911.		1921.	
	Rural.	Urban.	Rural.	Urban.
Prince Edward Island	84·03	15·97	78·45	21·55
Nova Scotia	62·20	37·80	56·66	43·34
New Brunswick	71·71	28·29	67·92	32·08
Quebec	51·80	48·20	43·99	56·01
Ontario	47·43	52·57	41·80	58·20
Manitoba	56·57	43·43	57·12	42·88
Saskatchewan	73·32	26·68	71·10	28·90
Alberta	63·22	36·78	62·12	37·88
British Columbia	48·10	51·90	52·81	47·19
Yukon Territory	54·59	45·41	76·55	23·45
N.W. Territories	100·00	–	100·00	–
Royal Canadian Navy	–	–	100·00	–
Canada	**54·58**	**45·42**	**50·48**	**49·52**

NOTE.—In using this table, reference should be made to the notes appended to the preceding table showing rural and urban population by numbers.

[1] The population in the territory now comprised in the Provinces of Alberta and Saskatchewan and the Yukon and Northwest Territories was classified as rural in the census of 1891.

30.—Urban Population of Canada, divided by Size of Municipality Groups, 1901, 1911 and 1921.

In Cities and Towns of	1901.			1911.			1921.		
	Number of Places.	Population.	Per cent of Total Pop.	Number of Places.	Population.	Per cent of Total Pop.	Number of Places.	Population.	Per cent of Total Pop.
Over 500,000	–	–	–	–	–	–	2	1,140,399	12·97
Between—									
400,000 and 500,000	–	–	–	1	470,480	6·53	–	–	–
300,000 and 400,000	–	–	–	1	376,538	5·22	–	–	–
200,000 and 300,000	2	475,770	8·86	–	–	–	–	–	–
100,000 and 200,000	–	–	–	2	236,436	3·28	4	518,298	5·90
50,000 and 100,000	3	181,402	3·38	3	247,741	3·44	5	336,650	3·83
25,000 and 50,000	5	188,869	3·52	6	241,007	3·34	7	239,096	2·72
15,000 and 25,000	3	55,499	1·03	13	237,551	3·30	19	370,990	4·22
10,000 and 15,000	8	95,266	1·77	18	221,322	3·07	18	224,033	2·55
5,000 and 10,000	37	275,919	5·14	46	323,056	4·48	54	382,762	4·36
3,000 and 5,000	50	190,789	3·55	60	226,212	3·14	73	276,026	3·14
1,000 and 3,000	187	320,433	5·97	251	429,553	5·97	292	489,461	5·57
500 and 1,000	179	130,238	2·42	247	180,784	2·51	–	374,727	4·26
Under 500	–	107,614	2·00	–	90,284	1·25	–		
Total	–	**2,021,799**	**37·64**	–	**3,280,964**	**45·53**	–	**4,352,402**	**49·52**

31.—Ratio of Females to Males in Rural and Urban Populations, 1921.

Provinces.	Rural.	Urban.	Provinces.	Rural.	Urban.
	p.c.	p.c.		p.c.	p.c.
Prince Edward Island	93·55	112·90	Alberta	74·63	94·04
Nova Scotia	92·45	102·26	British Columbia	71·91	87·16
New Brunswick	91·48	108·19	Yukon	45·76	51·33
Quebec	93·09	106·02	N. W. Territories	93·46	–
Ontario	88·66	105·24			
Manitoba	84·36	98·90	**Canada, 1921**	**86·20**	**102·68**
Saskatchewan	79·29	93·23	**Canada, 1911**	**83·52**	**94·95**

32.—Population of Cities and Towns having over 5,000 Inhabitants in 1921, compared with 1871-81-91-1901-11.

NOTE.—The cities and towns in which a Board of Trade exists are indicated by an asterisk(*). In all cases the population is for the city or town municipality as it existed in 1921.

Cities and Towns.	Provinces.	Population.					
		1871.	1881.	1891.	1901.	1911.	1921.
*Montreal	Quebec	115,000	155,238	219,216	328,172	490,504[1]	618,506
*Toronto	Ontario	59,000	96,196	181,215	209,892[2]	381,833[2]	521,893
*Winnipeg	Manitoba	241	7,985	25,639	42,340	136,035	179,087
*Vancouver	British Columbia	–	–	13,709	27,010	100,401	117,217
*Hamilton	Ontario	26,880	36,661	48,959	52,634	81,969	114,151
*Ottawa	"	24,141	31,307	44,154	59,928	87,062	107,843
*Quebec	Quebec	59,699	62,446	63,090	68,840	78,710	95,193
*Calgary	Alberta	–	–	3,876	4,392	43,704	63,305
*London	Ontario	18,000	26,266	31,977	37,976	46,300	60,959
*Edmonton	Alberta	–	–	–	4,176	31,064[3]	58,821
*Halifax	Nova Scotia	29,582	36,100	38,437	40,832	46,619	58,372
*St. John	New Brunswick	41,325	41,353	39,179	40,711	42,511	47,166
*Victoria	British Columbia	3,270	5,925	16,841	20,919	31,660	38,727
*Windsor	Ontario	4,253	6,561	10,322	12,153	17,829	38,591
*Regina	Saskatchewan	–	–	–	2,249	30,213	34,432
*Brantford	Ontario	8,107	9,616	12,753	16,619	23,132	29,440
*Saskatoon	Saskatchewan	–	–	–	113	12,004	25,739
Verdun	Quebec	–	–	296	1,898	11,629	25,001
*Hull	"	3,800	6,890	11,264	13,993	18,222	24,117

32.—Population of Cities and Towns having over 5,000 inhabitants in 1921, compared with 1871-81-91-1901-11.—continued.

Cities and Towns.	Provinces.	Population.					
		1871.	1881.	1891.	1901.	1911.	1921.
*Sherbrooke	Quebec	4,432	7,227	10,110	11,765	16,405	23,515
*Sydney	Nova Scotia	–	1,480	2,427	9,909	17,723	22,545
Three Rivers	Quebec	7,570	8,670	8,334	9,981	13,691	22,367
*Kitchener	Ontario	2,743	4,054	7,425	9,747	15,196	21,763
*Kingston	"	12,407	14,091	19,263	17,961	18,874	21,753
*Sault Ste. Marie	"	879	780	2,414	7,169	14,920[4]	21,092
*Peterborough	"	4,611	6,812	9,717	12,886	18,360	20,994
*Fort William	"	–	–	–	3,633	16,499	20,541
*St. Catharines	"	7,864	9,631	9,170	9,946	12,484	19,881
*Moose Jaw	Saskatchewan	–	–	–	1,558	13,823	19,285
*Guelph	Ontario	6,878	9,890	10,537	11,496	15,175	18,128
Westmount	Quebec	200	884	3,076	8,856	14,579	17,593
*Moncton	New Brunswick	600	5,032	8,762	9,026	11,345	17,488
*Glace Bay	Nova Scotia	–	–	2,459	6,945	16,562	17,007
*Stratford	Ontario	4,313	8,239	9,500	9,959	12,946	16,094
*St. Thomas	"	2,197	8,367	10,366	11,485	14,054	16,026
*Lachine	Quebec	1,696	2,406	3,761	6,365	11,688[5]	15,404
*Brandon	Manitoba	–	–	3,778	5,620	13,839	15,397
*Port Arthur	Ontario	–	–	–	3,214	11,220	14,886
*Sarnia	"	2,929	3,874	6,692	8,176	9,947	14,877
*Niagara Falls	"	–	2,347	3,349	5,702	9,248	14,764
*New Westminster	British Columbia	–	1,500	6,678	6,499	13,199	14,495
*Chatham	Ontario	5,873	7,873	9,052	9,068	10,770	13,256
Outremont	Quebec	–	387	795	1,148	4,820	13,249
*Galt	Ontario	3,827	5,187	7,535	7,866	10,299	13,216
*St. Boniface	Manitoba	–	1,283	1,553	2,019	7,483	12,821
*Charlottetown and Royalty	P. E. Island	8,807	11,485	11,373	12,080	11,203	12,347
*Belleville	Ontario	7,305	9,516	9,916	9,117	9,876	12,206
*Owen Sound	"	3,369	4,426	7,497	8,776	12,558	12,190
*Oshawa	"	3,185	3,992	4,066	4,394	7,436	11,940
*Lethbridge	Alberta	–	–	–	2,072	9,035	11,097
*St. Hyacinthe	Quebec	3,746	5,321	7,016	9,210	9,797	10,859
*North Bay	Ontario	–	–	–	2,530	7,737	10,692
Shawinigan Falls	Quebec	–	–	–	2,768	4,265	10,625
*Lévis	"	6,691	7,597	7,301	9,242	8,703[6]	10,470
*Brockville	Ontario	5,102	7,609	8,791	8,940	9,374	10,043
*Amherst	Nova Scotia	–	2,274	3,781	4,964	8,973	9,998
*Woodstock	Ontario	3,982	5,373	8,612	8,833	9,320	9,935
*Medicine Hat	Alberta	–	–	–	1,570	5,608	9,634
*Valleyfield	Quebec	1,800	3,906	5,515	11,055	9,449	9,215
*Joliette	"	3,047	3,268	3,347	4,220	6,346	9,113
*Nanaimo and suburbs	British Columbia	–	1,645	4,595	6,130	8,306	9,088
*New Glasgow	Nova Scotia	–	2,595	3,776	4,447	6,383	8,974
*Chicoutimi	Quebec	1,393	1,935	2,277	3,826	5,880	8,937
*Orillia	Ontario	1,322	2,911	4,752	4,907	6,828	8,774
*Welland	"	1,110	1,870	2,035	1,863	5,318	8,654
*Sudbury	"	–	–	–	2,027	4,150	8,621
Sydney Mines	Nova Scotia	–	2,340	2,442	3,191	7,470	8,327
*Sorel	Quebec	5,636	5,791	6,669	7,057	8,420	8,174
*Fredericton	New Brunswick	6,006	6,218	6,502	7,117	7,208	8,114
*Dartmouth	Nova Scotia	–	3,786	6,252	4,806	5,058	7,899
*Thetford Mines	Quebec	–	–	–	3,256	7,261	7,886
Pembroke	Ontario	1,508	2,820	4,401	5,156	5,626	7,875
*St. Johns	Quebec	3,022	4,314	4,722	4,030	5,903	7,734
*Rivière du Loup	"	1,541	2,291	4,175	4,569	6,774	7,703
*North Vancouver	British Columbia	–	–	–	–	8,196[7]	7,652
*Grand'Mère	Quebec	–	–	–	2,511	4,783	7,631
*Lindsay	Ontario	4,049	5,080	6,081	7,003	6,964	7,620
*Truro	Nova Scotia	–	3,461	5,102	5,993	6,107	7,562
Prince Albert	Saskatchewan	–	–	–	1,785	6,254	7,558
*Cornwall	Ontario	2,033	4,468	6,805	6,704	6,598	7,419
*Yarmouth	Nova Scotia	2,500	3,485	6,089	6,430	6,690	7,073
Walkerville	Ontario	–	–	933	1,595	3,302	7,059
Midland	"	–	1,095	2,088	3,174	4,663	7,016
*Barrie	"	3,398	4,854	5,550	5,949	6,420	6,936
*Smith Falls	"	1,150	2,087	3,864	5,155	6,370	6,790
*Granby	Quebec	876	1,040	1,710	3,773	4,750	6,785
*Portage la Prairie	Manitoba	–	–	3,363	3,901	5,892	6,766
Cap Magdeleine	Quebec	1,226	1,437	1,289	1,464	2,101	6,738
*North Sydney	Nova Scotia	–	1,520	2,513	4,646	5,418	6,585
*Prince Rupert	British Columbia	–	–	–	–	4,184	6,393
*Trenton	Ontario	1,796	3,042	4,363	4,217	3,988	5,902
*Waterloo	"	1,594	2,066	2,941	3,537	4,359	5,883

32.—Population of Cities and Towns having over 5,000 inhabitants in 1921, compared with 1871-81-91-1901-11.—concluded.

Cities and Towns.	Provinces.	Population.					
		1871.	1881.	1891.	1901.	1911.	1921.
*Collingwood	Ontario	2,829	4,445	4,939	5,755	7,090	5,882
Ford City	"	–	–	–	–	–	5,870
*Springhill	Nova Scotia	–	900	4,813	4,359	5,713	5,681
New Waterford	"	–	–	–	–	–	5,615
La Tuque	Quebec	–	–	–	–	2,934	5,603
*Campbellton	New Brunswick	–	–	–	2,652	3,817	5,570
*Hawkesbury	Ontario	1,671	1,920	2,042	4,150	4,400	5,544
*St. Jérôme	Quebec	1,159	2,032	2,868	3,619	3,473	5,491
*Preston	Ontario	1,408	1,419	1,843	2,308	3,883	5,423
*Kenora	"	–	–	1,806	5,202	6,158	5,407
*Cobourg	"	4,442	4,957	4,829	4,239	5,074	5,327
Eastview	"	–	–	–	776	3,169	5,324
Stellarton	Nova Scotia	–	–	2,410	2,335	3,910	5,312
*Nelson	British Columbia	–	–	–	5,273[8]	4,476	5,230
Magog	Quebec	1,174	1,248	2,100	3,516	3,978	5,159
*Yorkton	Saskatchewan	–	–	–	700	2,309	5,151
*Ingersoll	Ontario	4,022	4,318	4,191	4,573	4,763	5,150

[1] Includes Maisonneuve, Cartierville, Bordeau and Sault-au-Récollet. [2] Includes North Toronto, less 67 in 1911 transferred to Township of York. [3] Includes town of Strathcona. [4] Includes town of Steelton. [5] Includes parish of Lachine and Summerlea town. [6] Includes Notre-Dame des Victoires. [7] Includes North Vancouver District. [8] Includes suburbs in 1901.

33.—Population of Towns and Villages having between 1,000 and 5,000 inhabitants in 1921, as compared with 1901 and 1911.

Towns and Villages.	1901.	1911.	1921.
Prince Edward Island.			
Summerside	2,875	2,678	3,228
Souris	1,140	1,089	1,094
Nova Scotia.			
Westville	3,471	4,417	4,550
Windsor	3,398	3,452	3,591
Bridgewater	2,203	2,775	3,147
Pictou	3,235	3,179	2,988
Inverness	306	2,719	2,963
Trenton	1,274	1,749	2,844
Lunenburg	2,916	2,681	2,792
Parrsboro	3,391	2,856	2,748
Kentville	1,731	2,304	2,717
Dominion	1,546	2,589	2,390
Liverpool	1,937	2,109	2,294
Antigonish	1,838	1,787	1,746
Wolfville	1,412	1,458	1,743
Joggins	1,088	1,648	1,732
Canso	1,479	1,617	1,626
Wedgeport	1,026	1,392	1,424
Oxford	1,285	1,392	1,402
Shelburne	1,445	1,435	1,360
Digby	1,150	1,247	1,230
Mahone Bay	866	951	1,177
Louisburg	1,046	1,006	1,152
Bridgetown	858	996	1,086
New Brunswick.			
Chatham	4,868	4,666	4,506
Edmundston	–	1,821	4,035
Newcastle	2,507	2,945	3,507
St. Stephen	2,840	2,836	3,452
Woodstock	3,644	3,856	3,380
Bathurst	1,044	960	3,327
Sussex	1,398	1,906	2,198
Sackville	1,444	2,039	2,173
Milltown	2,044	1,804	1,976
Shediac	1,075	1,442	1,973
Dalhousie	862	1,650	1,958
Devon	–	–	1,924
Marysville	1,892	1,837	1,614

Towns and Villages.	1901.	1911.	1921.
New Brunswick—concluded.			
Grand Falls	644	1,280	1,327
Sunny Brae	–	–	1,171
Richibucto	100	871	1,158
St. George	733	988	1,110
St. Andrews	1,064	987	1,065
Quebec.			
Lauzon	3,416	3,978	4,966
Jonquière	–	2,354	4,851
Longueuil (city)	2,835	3,972	4,682
Montmagny	1,919	2,617	4,145
St. Lambert	1,362	3,344	3,890
Buckingham	2,936	3,854	3,835
East Angus	–	–	3,802
Victoriaville	1,693	3,028	3,759
Rimouski	1,804	3,097	3,612
Coaticook	2,880	3,165	3,554
St. Pierre	505	2,201	3,535
Farnham	3,114	3,560	3,343
Beauport	–	–	3,240
St. Laurent	1,390	1,860	3,232
Mégantic	2,171	2,816	3,140
St. Jérôme de Matane	1,176	2,056	3,050
Ste. Thérèse	1,541	2,120	3,043
Aylmer	2,291	3,109	2,970
Drummondville	1,450	1,725	2,852
Ste. Agathe des Monts	1,073	2,020	2,812
Mont Joli	822	2,141	2,799
Black Lake	–	2,645	2,656
Pointe Claire St. Joachim	555	793	2,617
Bromptonville	–	1,239	2,603
Lachute	2,022	2,407	2,592
Kenogami	–	–	2,557
Iberville	1,512	1,905	2,454
Richmond	2,057	2,175	2,450
Nicolet	2,225	2,593	2,342
Windsor	2,149	2,233	2,330
Baie St. Paul	1,408	1,857	2,291
Beauharnois	1,976	2,015	2,250
Ste. Anne de Bellevue	1,343	1,416	2,212
Mont-Laurier	–	752	2,211
Bagotville	507	1,011	2,204

33.—Population of Towns and Villages having between 1,000 and 5,000 inhabitants in 1921, as compared with 1901 and 1911.—continued.

Towns and Villages.	1901.	1911.	1921.
Quebec—concluded.			
Berthier	1,364	1,335	2,193
Asbestos	783	2,224	2,189
Laprairie	1,451	2,388	2,158
Roberval	1,248	1,737	2,068
Loretteville	1,555	1,588	2,066
Waterloo	1,797	1,886	2,063
Terrebonne	1,822	1,990	2,056
Plessisville	1,586	1,559	2,032
Laval des Rapides	–	–	1,989
Pointe Gatineau	1,583	1,751	1,919
Montmorency	–	1,717	1,904
Malbaie	826	1,449	1,883
Montreal West	352	703	1,882
Ste. Rose	1,154	1,480	1,811
Saindon	–	–	1,793
St. Tite	991	1,438	1,783
Montreal East	–	–	1,776
Louiseville	1,565	1,675	1,772
Point-aux-Trembles	–	1,167	1,764
Chandler	–	–	1,756
Marieville	1,306	1,587	1,748
Grande Baie	–	1,355	1,735
Sacré Cœur de Jésus	206	996	1,709
St. Raymond	1,272	1,653	1,693
Bedford	1,364	1,432	1,669
St. Gabriel de Brandon	1,199	1,602	1,667
St. Joseph (Richelieu)	647	1,416	1,658
Ste. Anne de Beaupré	847	2,066	1,648
Disraeli	1,018	1,606	1,646
Lennoxville	1,120	1,211	1,554
Acton Vale	1,175	1,402	1,549
St. Marc-des-Carrières	296	1,224	1,492
Amos	–	–	1,488
Dorval	481	1,005	1,466
Bienville	851	1,004	1,462
St. Casimir	–	–	1,457
Trois-Pistoles	–	–	1,454
Beauceville	–	1,677	1,448
St. Joseph (Beauce)	1,117	1,440	1,445
Rock Island	615	861	1,442
Pont Rouge	–	–	1,419
Belœil	702	1,501	1,418
St. Benoit Joseph Labre	–	1,070	1,416
Huntingdon	1,122	1,265	1,401
Pierreville	1,108	1,363	1,394
Montreal North	–	–	1,360
Lac-au-Saumon	–	1,171	1,354
St. Jacques	–	–	1,332
L'Assomption	1,605	1,747	1,320
Ste. Marie	–	–	1,311
St. Félicien	–	581	1,306
Courville	–	–	1,293
Danville	1,017	1,331	1,290
Charlesbourg	–	–	1,267
Giffard	–	–	1,254
Arthabaska	995	1,458	1,234
Donnaconna	–	–	1,225
Baie Shawinigan	–	1,024	1,213
Port d'Alfred	–	–	1,213
Almaville	–	–	1,174
Laurentides	934	1,128	1,150
Como	628	898	1,146
Deschaillons	1,213	1,161	1,142
St. Rémi	1,080	1,021	1,135
Greenfield Park	–	–	1,112
Macamic	–	–	1,104
St. Eustache	1,079	996	1,098
Cowansville	699	881	1,094
La Providence	819	894	1,078
Chambly Basin	849	900	1,068
St. George East	544	1,410	1,058
Rawdon	–	–	1,042
Montreal South	–	790	1,030
Abord-à-Plouffe	–	–	1,011

Towns and Villages.	1901.	1911.	1921.
Ontario.			
Dundas	3,173	4,299	4,978
Renfrew	3,153	3,846	4,906
Thorold	1,979	2,273	4,825
Brampton	2,748	3,412	4,527
Port Hope	4,188	5,092	4,456
Cobalt	–	5,638	4,449
Sandwich	1,450	2,302	4,415
Paris	3,229	4,098	4,368
Sturgeon Falls	1,418	2,199	4,125
Goderich	4,158	4,522	4,107
Arnprior	4,152	4,405	4,077
Penetanguishene	2,422	3,568	4,037
Wallaceburg	2,763	3,438	4,006
Simcoe	2,627	3,227	3,953
St. Marys	3,384	3,388	3,847
Timmins	–	–	3,843
Carleton Place	4,059	3,621	3,841
Perth	3,588	3,588	3,790
Mimico	437	1,373	3,751
Haileybury	–	3,874	3,743
Leamington	2,451	2,652	3,675
Newmarket	2,125	2,996	3,626
Gananoque	3,526	3,804	3,604
Parry Sound	2,884	3,429	3,546
Rockland	1,998	3,397	3,496
Port Colborne	1,253	1,624	3,415
Picton	3,698	3,564	3,356
Cochrane	–	1,715	3,306
Oakville	1,643	2,372	3,298
Bowmanville	2,731	2,814	3,233
Dunnville	2,105	2,861	3,224
Weston	1,083	1,875	3,166
Petrolia	4,135	3,518	3,148
Fort Frances	697	1,611	3,109
Napanee	3,143	2,807	3,038
Tilsonburg	2,241	2,758	2,974
Campbellford	2,485	3,051	2,890
Whitby	2,110	2,248	2,800
Hanover	1,392	2,342	2,781
Hespeler	2,457	2,368	2,777
Amherstburg	2,222	2,560	2,769
Burlington	1,119	1,831	2,709
Strathroy	2,933	2,823	2,691
New Toronto	209	686	2,669
Meaford	1,916	2,811	2,650
Prescott	3,019	2,801	2,636
Copper Cliff	2,500	3,082	2,597
Merritton	1,710	1,670	2,544
Listowel	2,693	2,289	2,477
Bracebridge	2,479	2,776	2,451
Almonte	3,023	2,452	2,426
Bridgeburg	1,356	1,770	2,401
Portsmouth	1,827	1,786	2,351
Walkerton	2,971	2,601	2,344
Aurora	1,590	1,901	2,307
New Liskeard	–	2,108	2,268
Huntsville	2,152	2,358	2,246
Alexandria	1,911	2,323	2,195
Aylmer	2,204	2,102	2,194
Orangeville	2,511	2,340	2,187
Wingham	2,392	2,238	2,092
Kincardine	2,077	1,956	2,077
Georgetown	1,313	1,583	2,061
Clinton	2,547	2,254	2,018
Elmira	1,060	1,782	2,016
Grimsby	1,001	1,669	2,004
Milton	1,372	1,654	1,873
Ridgetown	2,405	1,954	1,855
Deseronto	3,527	2,013	1,847
Blind River	2,656	2,558	1,843
Seaforth	2,245	1,983	1,829
Mitchell	1,945	1,766	1,800
Fergus	1,396	1,534	1,796
Kingsville	1,537	1,427	1,783

33.—Population of Towns and Villages having between 1,000 and 5,000 inhabitants in 1921, as compared with 1901 and 1911.—concluded.

Towns and Villages.	1901.	1911.	1921.
Ontario—concluded.			
Wiarton	2,443	2,266	1,726
Acton	1,484	1,720	1,722
Mount Forest	2,019	1,839	1,718
Chesley	1,734	1,734	1,708
Tilbury	1,012	1,368	1,673
Thessalon	1,205	1,945	1,651
Essex	1,391	1,353	1,588
Blenheim	1,653	1,387	1,565
Fort Erie	890	1,146	1,546
Southampton	1,636	1,685	1,537
Humberstone	–	–	1,524
Palmerston	1,850	1,665	1,523
Vankleek Hill	1,674	1,577	1,499
Durham	1,422	1,581	1,494
Port Dalhousie	1,125	1,152	1,492
Gravenhurst	2,146	1,624	1,478
Victoria Harbour	989	1,616	1,463
Port Dover	1,177	1,138	1,462
Mattawa	1,400	1,524	1,462
Morrisburg	1,693	1,696	1,444
Rainy River	–	1,578	1,444
Exeter	1,792	1,555	1,442
Forest	1,553	1,445	1,422
Brighton	1,378	1,320	1,411
Alliston	1,256	1,279	1,376
Niagara	1,258	1,318	1,357
New Hamburg	1,208	1,484	1,351
Dresden	1,613	1,551	1,339
Tweed	1,168	1,368	1,339
Keewatin	1,156	1,242	1,327
L'Orignal	1,026	1,347	1,298
Port Elgin	1,313	1,235	1,291
Capreol	–	–	1,287
Havelock	984	1,436	1,268
Harriston	1,637	1,491	1,263
Point Edward	780	874	1,258
Beamsville	832	1,096	1,256
Cardinal	1,378	1,111	1,241
Caledonia	801	952	1,223
Kemptville	1,523	1,192	1,204
Lakefield	1,244	1,397	1,189
Iroquois Falls	–	–	1,178
Norwich	1,269	1,112	1,176
Hagersville	1,020	1,106	1,169
Riverside	–	–	1,155
Parkhill	1,430	1,289	1,152
Port Perry	1,465	1,148	1,143
Chippawa	460	707	1,137
Elora	1,187	1,197	1,136
Sioux Lookout	–	550	1,127
Winchester	1,101	1,143	1,126
Port Credit	–	–	1,123
Waterford	1,122	1,083	1,123
Arthur	1,285	1,102	1,104
Bobcaygeon	914	1,000	1,095
Port McNicoll	–	–	1,074
Shelburne	1,188	1,113	1,072
Watford	1,279	1,092	1,059
Madoc	1,157	1,058	1,058
Richmond Hill	629	652	1,055
Stouffville	1,223	1,034	1,053
Chelmsford	493	550	1,045
Fenelon Falls	1,132	1,053	1,031
Dryden	140	715	1,019
Eganville	1,107	1,189	1,015
Markham	967	909	1,012
Tavistock	403	981	1,011
Manitoba.			
Transcona	–	–	4,185
Dauphin	1,135	2,815	3,885
Selkirk	2,188	2,977	3,726
Neepawa	1,418	1,864	1,887
Pas	–	–	1,858
Souris	839	1,854	1,710
Carman	1,439	1,271	1,591
Minnedosa	1,052	1,483	1,505
Virden	901	1,550	1,361
Morden	1,522	1,130	1,268
Stonewall	589	1,005	1,112
Tuxedo	–	–	1,062
Saskatchewan.			
North Battleford (city)	–	2,105	4,108
Swift Current (city)	121	1,852	3,518
Weyburn (city)	113	2,210	3,193
Melville	–	1,816	2,808
Estevan	141	1,981	2,290
Kamsack	–	473	2,002
Humboldt	–	859	1,822
Melfort	–	599	1,746
Biggar	–	315	1,535
Indian Head	768	1,285	1,439
Canora	–	435	1,230
Battleford	609	1,335	1,229
Shaunavon	–	–	1,146
Gravelbourg	–	–	1,106
Watrous	–	781	1,101
Moosomin	868	1,143	1,099
Rosthern	413	1,172	1,074
Assiniboia	–	–	1,006
Kindersley	–	456	1,003
Maple Creek	382	936	1,002
Alberta.			
Drumheller	–	–	2,499
Red Deer (city)	323	2,118	2,328
Wetaskiwin (city)	550	2,411	2,061
Camrose	–	1,586	1,892
Macleod	796	1,844	1,723
Taber	–	1,400	1,705
Cardston	639	1,207	1,612
Ponoka	151	642	1,594
Coleman	–	1,557	1,590
Blairmore	231	1,137	1,552
Vegreville	–	1,029	1,479
Stettler	–	1,444	1,416
Raymond	–	1,465	1,394
Hanna	–	–	1,364
Vermilion	–	625	1,272
High River	153	1,182	1,198
Edson	–	497	1,138
Redcliff	–	220	1,137
Lacombe	499	1,029	1,133
Magrath	424	995	1,069
Grande Prairie	–	–	1,061
Big Valley	–	–	1,057
Beverly	–	–	1,039
British Columbia.			
Kamloops	–	3,772	4,501
Fernie	–	3,146	4,343
Vernon	802	2,671	3,685
Cumberland	732	1,237	3,176
Trail	1,360	1,460	3,020
Revelstoke	1,600	3,017	2,782
Cranbrook	1,196	3,090	2,725
Kelowna	261	1,663	2,520
Port Coquitlam	–	–	2,148
Rossland	6,156	2,826	2,097
Prince George	–	–	2,053
Ladysmith	746	3,295	1,967
Chilliwack	277	1,657	1,767
Merritt	–	703	1,721
Grand Forks	1,012	1,577	1,469
Duncan	–	–	1,178
Port Alberni	–	–	1,056
Port Moody	–	–	1,030

10.—Quinquennial Population of the Prairie Provinces.

The Census and Statistics Act, 1905, provided for taking a census of population and agriculture in Manitoba, Saskatchewan and Alberta in 1906 and in every tenth year thereafter, thus instituting, in addition to the general decennial census for all Canada, a quinquennial census of population and agriculture for the three prairie provinces. The quinquennial census of Manitoba, Saskatchewan and Alberta was therefore taken as for June 1, 1916, and the complete results were published in a report dated January 12, 1918. A summary of the principal data was published in the Year Book for 1918, pages 105-112.

Total Population of Prairie Provinces.—The male and female population of Manitoba, Saskatchewan and Alberta (*a*) by provinces, (*b*) by the electoral districts constituted by the Representation Act, 1914 (4-5 Geo. V, c. 51), and (*c*) by cities, towns and villages, as compared with the population by sex for 1911 and by totals for 1901 and 1906, was published in the Year Book of 1916-17 (pp. 95-105). The total population of the three prairie provinces in 1916 was returned as 1,698,220, as compared with 1,328,121 in 1911, 808,863 in 1906 and 419,512 in 1901. As the population of the prairie provinces in 1921 was 1,956,082, the increase during the five year period since 1916 was 257,862 or 15·18 p.c. This comparatively low rate of increase, as compared with the increase of 28 p.c. during the five years ended 1916, was undoubtedly due to the effect of the war in restricting immigration. Table 34 shows the population of the prairie provinces for 1901, 1906, 1911, 1916 and 1921, the population being distinguished by sex for 1911 and 1916. In Table 35 are furnished statistics of the population of Manitoba from 1870, and of Saskatchewan and Alberta from 1901, with the percentage of increase in each quinquennium.

34.—Population of the Prairie Provinces, 1901, 1906, 1911, 1916 and 1921.

Provinces.	1901.	1906.	1911.			1916.			1921.
	Total.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Total.
Manitoba	255,211	365,688	252,954	208,440	461,394	294,609	259,251	553,860	610,118
Saskatchewan	91,279	257,763	291,730	200,702	492,432	363,787	284,048	647,835	757,510
Alberta	73,022	185,412	223,792	150,503	374,295	277,256	219,269	496,525	588,454
Total	**419,512**	**808,863**	**768,476**	**559,645**	**1,328,121**	**935,652**	**762,568**	**1,698,220**	**1,956,082**

35.—Population of the Prairie Provinces by Sex at each Census Period from 1870 for Manitoba and from 1901 for Saskatchewan and Alberta.

Province and Years.	Population.			Increase over Preceding Census.					
	Males.	Females.	Total.	Males.		Females.		Total.	
	No.	No.	No.	No.	p.c.	No.	p.c.	No.	p.c.
Manitoba—									
1870	6,317	5,911	12,228	–	–	–	–	–	–
1881	35,123	27,137	62,260	28,806	456·01	21,226	359·10	50,032	409·16
1886	59,594	49,046	108,640	24,471	69·67	21,909	80·73	46,380	74·49
1891	84,342	68,164	152,506	24,748	41·53	19,118	38·98	43,866	40·37
1896	[1]	[1]	193,425	–	–	–	–	40,919	26·83
1901[2]	138,504	116,707	255,211	54,162	64·22	48,543	71·22	102,705	67.34
1906	205,183	160,505	365,688	66,679	48·14	43,798	37·53	110,477	43·29
1911	252,954	208,440	461,394	47,771	23·28	47,935	29·87	95,706	26·17
1916	294,609	259,251	553,860	41,655	16·51	50,811	24·37	92,466	20·04
1921	320,567	289,551	610,118	25,958	8·81	30,300	11·69	56,258	10·16

[1] In 1896 the Census consisted of a count of population only.
[2] Ten-year increase shown.

35.—Population of Prairie Provinces by Sex at each Census Period from 1870 for Manitoba and from 1901 for Saskatchewan and Alberta—concluded.

Province and Years.	Population.			Increase over Preceding Census.					
	Males.	Females.	Total.	Males.		Females.		Total.	
	No.	No.	No.	No.	p.c.	No.	p.c.	No.	p.c.
Saskatchewan—									
1901	49,431	41,848	91,279	–	–	–	–	–	–
1906	152,791	104,972	257,763	103,360	209·10	63,124	150·84	166,484	182·39
1911	291,730	200,702	492,432	138,939	90·93	95,730	91·20	234,669	91·05
1916	363,787	284,048	647,835	72,057	24·70	83,346	41·52	155,403	31·50
1921	413,700	343,810	757,510	49,913	13·72	59,762	21·04	109,675	16·93
Alberta—									
1901	41,019	32,003	73,022	–	–	–	–	–	–
1906	108,283	77,129	185,412	67,264	162·98	45,126	141·00	112,390	153·91
1911	223,792	150,503	374,295	115,509	106·67	73,374	95·13	188,883	101·87
1916	277,256	219,269	496,525	53,464	23·89	68,766	45·69	122,230	32·66
1921	324,208	264,246	588,454	46,952	16·93	44,977	20·51	91,929	18·51
Prairie Provinces—									
1901	228,954	190,558	419,512	–	–	–	–	–	–
1906	466,257	342,606	808,863	237,303	103·64	152,048	79·79	389,351	92·81
1911	768,476	559,645	1,328,121	302,219	64·82	217,039	63·35	519,258	64·20
1916	935,652	762,568	1,968,220	167,176	21·75	202,923	36·26	369,495	28·87
1921	1,058,475	897,607	1,956,082	122,823	13·13	135,039	17·71	257,862	15·18

11.—Population of the British Empire.

During the decade 1911-1921 the boundaries of the British Empire were contracted by the voluntary giving up of Egypt and expanded by the addition of various territories as a result of the war. The increases of territory were mainly in Africa, where the Tanganyika Territory, Southwest Africa, and portions of the Cameroons and Togoland were added to the Empire, with an aggregate area of 731,000 square miles and an estimated population of slightly over 5,000,000. In Asia the territories acquired by mandate from the League of Nations include Palestine and Mesopotamia, with 3,619,282 inhabitants on an area of 152,250 square miles. In the Pacific the territories added to the Empire include Western Samoa, the Territory of New Guinea, the Bismarck Archipelago and part of the Solomon islands, all of which were formerly German possessions. According to the most reliable estimates the total area of these regions is 90,802 square miles with a population of 637,051.

Statistics of the area and population of the territories included in the British Empire in 1921 are given in Table **36**, together with comparative figures of population for 1911.

36.—Area and Population of the British Empire, by Countries, 1911 and 1921.

(From the British Statistical Abstract, Statesman's Year Book, and other sources.)

Countries.	Area in square miles, 1921.	Population.	
		Census of 1911.	Census of 1921.
Europe.			
England and Wales[1]	58,340	36,070,492	37,885,242
Scotland	30,405	4,760,904	4,882,288
Northern Ireland	32,586	1,250,531	1,284,000[2]
Irish Free State	}	(3,139,688)	3,139,688[3]
Isle of Man	227	52,016	60,238
Channel Islands	75	96,899	89,614
Gibraltar	1¾	19,120	21,000
Malta[6]	117	211,564	213,000
Total, Europe	**121,751¾**	**45,601,214**	**47,575,070**

36.—Area and Population of the British Empire, by Countries, 1911 and 1921—continued.

Countries.	Area in square miles, 1921.	Population.	
		Census of 1911.	Census of 1921.
Asia.			
Aden, including Perim	80	46,165	54,923
Socotra	1,382	12,000[4]	12,000[4]
Borneo—			
British North Borneo	31,106	208,183	208,183[3]
Brunei	4,000	21,718[4]	25,454
Sarawak	42,000	500,000	600,000
Total, Borneo	77,106	729,901	833,637
Bahrein Is. Prot	275	–	110,000[4]
Ceylon[6]	25,331	4,106,350	4,504,549
Maldive Is.	–	–	70,000[4]
Cyprus[6 7]	3,584	274,108	310,808[20]
Hong Kong[6]	391	366,145	625,166
New Territories		90,594	
India, British	1,093,074	244,221,377	247,003,293
Native States	709,555	70,888,854	71,939,187
Total, India	1,802,629	315,110,231	318,942,480
Straits Settlements	1,572	715,529	881,939
Labuan	28	6,546	
Christmas Is.	62	1,463[4]	1,100
Cocos or Keeling Is.	–	749	800
Total, Straits Settlements and dependencies	1,662	724,287	883,839
Asiatic Mandates—			
Palestine	9,000	–	757,182
Mesopotamia (Iraq)	143,250	–	2,849,282[17]
Total, Asiatic Mandates	152,250	–	3,606,464
Federated Malay States—			
Perak	7,875	494,057	500,055
Selangor	3,138	294,035	401,009
Negri Sembilan	2,573	130,199	178,762
Pahang	14,037	118,708	146,064
Total, Federated Malay States	27,623	1,036,999	1,324,890
Unfederated Malay States—			
Johore	7,500	180,412	282,244
Kedah	3,800	245,986	338,554
Perlis	316	32,746	40,091
Kelantan	5,870	286,751	309,293
Trengganu	6,000	154,073	153,092
Total, Unfederated Malay States	23,486	899,968	1,123,274
Wei-Hai-Wei	285	147,133	[8]
Total, Asia	**2,116,084**	**323,543,881**	**332,302,030**
Africa.			
British East Africa—			
Kenya Colony and Prot.	245,060	2,402,863[9]	2,376,000
Tanganyika Terr. (late German East Africa)	365,000	–	4,122,000
Uganda Prot.	110,300[10]	2,843,325	3,066,327[11]
Zanzibar Prot.	640	114,000	197,000[4]
Pemba	380	83,000	
Mauritius	720	368,791	385,074
Dependencies of	89	6,690	
Nyasaland Prot.	39,573	970,430	1,201,983
St. Helena	47	3,477	3,747
Ascension	34	400	250
Tristan da Cunha	–	–	130

36.—Area and Population of the British Empire, by Countries, 1911 and 1921—continued.

Countries.	Area in square miles, 1921.	Population.	
		Census of 1911.	Census of 1921.
Africa—concluded.			
Seychelles	156	22,691	24,811
Somaliland Prot	68,000	344,323	300,000[4]
South Africa—			
Basutoland	11,716	404,507	497,712
Bechuanaland Prot	275,000	125,350	152,983
Rhodesia, Southern	149,000	771,077	803,620
Rhodesia, Northern	291,000	822,482	931,500
Swaziland	6,678	99,959	133,563
Union of South Africa—			
Cape of Good Hope	276,966	2,564,965	2,782,719
Natal	35,284	1,194,043	1,429,398
Orange Free State	50,389	528,174	628,827
Transvaal	110,450	1,686,212	2,087,636
South West Africa	322,400	–	227,432
Total, Union of South Africa	795,489	5,973,394	7,156,012
West Africa—			
Nigeria, Colony and Protectorate of	336,700	{9,269,000[21] {7,857,983	18,500,000
British Cameroon	31,000	–	400,000[4]
Gambia[20]	4,132	146,101	240,000[4]
Gold Coast, Ashanti and Prot	79,506	1,503,386	2,078,043
Northern Terr. Prot	31,100	360,000[4]	527,914
Togoland	12,600	–	188,265
Sierra Leone[20]	30,000	1,403,132[12]	1,541,311
Total, West Africa	525,038	20,539,602	23,475,533
Anglo-Egyptian Sudan	1,014,000	3,400,000[13]	5,850,000
Total, Africa	**3,897,920**	**39,296,361**	**50,678,245**
America.			
Bermuda[6]	19	18,994	20,127
Dominion of Canada	3,729,665	7,206,643	8,788,483
Falkland Is	7,500	3,275	3,271
British Guiana[14]	89,480	296,041	307,391
British Honduras	8,592	40,458	45,317
Newfoundland	42,734	238,670	263,683
Labrador	120,000	3,949	3,621
West India Islands—			
Bahamas	4,404	55,944	53,031
Barbados	166	171,983	156,312
Jamaica	4,207	831,383	858,188
Cayman Is	89	5,486	5,253
Turk's and Caicos Is	166	5,615	5,612
Leeward Islands—			
Virgin Is	56	5,557	
St. Christopher	68	26,283	
Nevis	50	12,945	
Anguilla	34	4,075	122,242
Antigua, including Barbuda	170	32,265	
Montserrat	33	12,200	
Dominica	305	33,863	
Trinidad	1,862	312,803	365,913
Tobago	114	20,749	
Windward Islands—			
St. Lucia	233	48,637	52,250
St. Vincent	150	41,877	44,925
Grenada and the Grenadines	133	73,636	73,406
Total, West Indies	12,239	1,695,321	1,737,132
Total, America	**4,010,229**	**9,503,351**	**11,169,025**

36.—Area and Population of the British Empire, by Countries, 1911 and 1921—concluded.

Countries.	Area in square miles, 1921.	Population.	
		Census of 1911.	Census of 1921.
Australasia.			
Australia, Commonwealth of—			
New South Wales	309,432	1,646,734	2,099,763
Federal Capital Terr.	940	1,714	2,572
Victoria	87,884	1,315,551	1,531,529
South Australia	380,070	408,558	495,336
Northern Terr.	523,620	3,310	3,870
Western Australia	975,920	282,114	332,213
Tasmania	26,215	191,211	213,877
Queensland	670,500	605,813	757,634
Total, Commonwealth[15]	2,974,581	4,455,005	5,436,794
Territory of Papua	90,540	380,000[16]	276,888
Dom. of New Zealand[18]	103,861	1,008,468	1,218,913
Terr. of Western Samoa	1,260	–	37,157
Nauru	10	–	2,129
Fiji	7,083	139,541	157,266
Pacific Islands—			
Tongan Is. Prot. (Friendly Is.)	385	23,737	23,572[6]
Terr. of New Guinea (late German New Guinea)—			
New Guinea (Kaiser Wilhelm's Land)	70,000	–	350,000
Bismarck Archipelago	15,752	–	188,000[4]
Solomon Is. Prot.	3,800	–	17,000[5]
Brit. Solomon Islands Prot.	11,000	150,000	150,650[5]
Gilbert and Ellice Is. Colony	208	31,121	36,122
Phoenix Group	16	59	59
Pitcairn	2	140[19]	140
Starbuck Is.	1	–	–
Jarvis Is.	1½	30	30
Malden	35	168	168
Total, Pacific Islands	101,200½	205,255	765,741
Total, Australasia	**3,278,535½**	**6,188,269**	**7,894,888**
Grand total	**13,424,519⅜**	**421,133,076**	**449,719,258**
SUMMARY BY CONTINENTS—			
Europe	121,751⅞	45,601,214	47,575,070
Asia	2,116,084	323,543,881	332,302,030
Africa	3,897,920	39,296,361	50,678,245
America	4,010,229	9,503,351	11,169,025
Australasia	3,278,535½	6,188,269	7,894,888

[1] Territory heretofore known as the United Kingdom: area, 121,633 square miles; population, 1921, 47,341,070. [2] Estimated population Northern Ireland, 1922. [3] Census 1911. No census in 1921. [4] Estimated population. [5] Estimated population, 1919. [6] Excluding the military and persons on ships in narbours. [7] Administered by England under a convention dated 4th June, 1878; annexed on the 5th November, 1914. [8] By the Shantung settlement at Washington, January, 1922, Wei-Hai-Wei is restored to China. [9] Administered provinces only. [10] Including 16,169 square miles of water within the territorial limits of the Uganda Protectorate. [11] Estimated population, December, 1921. [12] Including 567,561 children—sex not stated. [13] Estimated population, 1917. [14] Exclusive of certain Aborigines estimated to number 13,000 at the census of 1911. [15] The population stated for Australia is exclusive of full-blooded Aborigines, estimated at 100,000 in 1911. [16] Number of Papuans estimated. [17] Population in 1920. [18] The area (280 square miles) and population (12,598 in 1911) of the Cook and other islands of the Pacific are excluded. The Maori population (49,844 in 1911) is also excluded. [19] Population in 1914. [20] Preliminary return. [21] Northern Protectorate and Southern Nigeria and Colony in 1911.

12.—Population of the World.

Statistics giving the number and density of the population of the various continents and countries of the world at the latest enumerations are presented in Table 37, which has in the main been based upon the similar table in the official year book of the Commonwealth of Australia. In many cases, more especially in Africa, the populations are rough approximations.

37.—Number and Density of the Population of the Various Countries of the World.

Country.	Population.	
	Number.	Density.[1]
Continents—		
Europe	474,970,182	126·60
Asia	1,017,676,054	59·86
Africa	144,368,361	12·55
North and Central America and the West Indies	145,531,487	18·19
South America	64,267,810	9·45
Australasia and Polynesia	8,569,840	2·46
Total	1,855,383,734	33·43
Europe—		
Russia	122,288,160	73·78
Germany	59,857,283	326·25
United Kingdom	47,341,070	388·85
Italy	40,070,161	362·19
France	39,209,766	184·38
Poland	26,886,399	180·39
Spain (incl. Canary and Balearic Islands.)	20,783,844	106·70
Rumania	17,393,149	142·24
Czecho-Slovakia	13,595,816	250·55
Jugo-Slavia	11,337,686	118·56
Hungary	7,840,832	219·91
Belgium	7,684,272	654·31
Netherlands	6,841,155	543·73
Austria	6,131,445	199·29
Portugal	5,957,985	167·88
Sweden	5,903,762	34·12
Greece	5,447,077	129·90
Bulgaria	4,861,439	119·57
Lithuania	4,800,000	31·07
Switzerland	3,880,320	242·88
Finland	3,335,237	22·30
Denmark	3,289,195	191·85
Norway	2,646,306	21·17
Turkey	1,891,000	173·77
Esthonia	1,750,000	75·56
Latvia	1,503,193	60·13
Albania	1,400,000	121·74
Danzig	351,380	495·62
Luxemburg	263,824	264·08
Malta	213,000	1,820·51
Iceland	94,690	2·38
Fiume	49,806	6,225·75
Monaco	22,956	2,869·50
Gibraltar	21,000	11,200·00
San Marino	12,027	316·50
Liechtenstein	10,716	164·86
Andorra	5,231	27·39
Total	474,970,182	126·60
Asia—		
China and Dependencies	436,094,053	111·43
British India	247,003,293	225·97
Japan and Dependencies (incl. Korea)	77,606,154	297·03
Feudatory Indian States	71,939,187	101·38
Dutch East Indies	49,161,047	87·38

Country.	Population.	
	Number.	Density.[1]
Asia—concluded.		
Russia in Asia	21,046,008	3·56
Philippine Islands	10,350,730	90·48
Persia	9,500,000	15·13
Siam	9,121,000	45·86
Turkey in Asia	8,456,900	30·95
Tonking	6,470,250	159·64
Afghanistan	6,380,500	26·04
Annam	5,731,189	144·15
Nepal	5,600,000	103·70
Arabia (Independent)	5,500,000	5·50
Ceylon	4,504,549	177·82
Cochin China	3,452,248	156·92
Syria	3,000,000	26·19
Bokhara	3,000,000	37·97
Mesopotamia	2,849,282	19·89
Smyrna	2,500,000	96·90
Kurdistan and Armenia (Turkish)	2,470,900	34·32
Georgia	2,372,403	92·10
Azerbaijan	2,096,973	61·73
Cambodia	2,000,000	34·54
Far Eastern Republic	1,811,725	2·78
Kiau Chau	1,427,000	528·52
Federated Malay States	1,324,890	47·96
Armenia	1,214,391	79·68
Malay Protectorate	1,123,274	47·83
Straits Settlements	883,839	531·79
British North Borneo, Brunei and Sarawak	833,637	10·81
Laos	800,000	8·29
Palestine	770,000	85·56
Hong Kong and Depend.	625,166	1,598·89
Goa, etc	548,472	334·84
Khiva	519,000	21·62
Oman	500,000	6·10
Timor, etc	377,815	51·54
Cyprus	310,808	86·72
French India	265,200	1,353·06
Bhutan	250,000	12·50
Kwang Chau Wang	168,000	884·21
Wei-hai-wei	147,177	516·41
Bahrein Islands	110,000	440·00
Macao, etc	74,866	18,716·50
Maldive Islands	70,000	608·70
Aden and Dependencies	54,923	6·10
Sokotra	12,000	8·68
Total	1,017,676,054	59·85
Africa—		
Belgian Congo	16,750,000	18·41
Nigeria and Protectorate	18,500,000	54·94
Egypt	13,387,000	38·25
French Equat. Africa	9,000,000	9·16
Abyssinia	8,000,000	22·86
Tanganyika Territory	4,122,000	11·29
Union of S. Africa	7,156,012	8·99
Algeria	5,800,974	26·11
Angola	4,119,000	8·50
Madagascar and adjacent islands	3,545,575	15·55

[1] Number of persons per square mile.

37.—Number and Density of the Population of the Various Countries of the World—concluded.

Country.	Population.	
	Number.	Density.[1]
Africa—concluded.		
Morocco	6,000,000	26·90
Anglo-Egyptian Sudan	5,850,000	5·76
Portuguese East Africa	3,120,000	7·29
Uganda Protectorate	3,066,327	27·79
Upper Volta	3,000,100	19·43
Kenya Protectorate	2,376,000	9·69
Senegambia and Niger	2,400,000	6·54
Tunis	2,093,939	41·88
Gold Coast and Protectorate	2,078,043	26·13
Liberia	2,000,000	50·00
French Guinea	1,851,200	19·44
Rhodesia	1,735,120	3·94
Ivory Coast	1,545,680	12·67
French Cameroon	1,500,000	9·01
Sierra Leone and Protectorate	1,541,311	51·04
Senegal	1,225,323	16·54
Nyasaland Protect.	1,201,983	30·37
British Cameroon	400,000	31·73
Tripolitania and Cyrenaica	1,000,000	2·46
Dahomey	860,590	10·26
French Sahara	800,000	0·52
Rio de Oro and Adrar	800,000	7·33
Territory of Niger	700,225	2·02
Italian Somaliland	650,000	4·66
Spanish Morocco	600,000	77·92
Basutoland	497,712	42·48
Togoland (British)	188,265	14·94
Togoland (French)	500,000	22·84
Eritrea	405,681	8·86
Mauritius and Depend.	385,074	475·98
British Somaliland	300,000	4·41
Portuguese Guinea	289,000	20·73
Mauretania	260,000	0·75
Gambia and Protect.	240,000	58·08
South West Africa	227,432	0·70
Spanish Guinea	200,000	21·12
Zanzibar and Pemba	197,000	193·13
Reunion	173,190	178·55
Bechuanaland Protect.	152,983	0·56
Cape Verde Islands	149,793	101·21
Swaziland	133,563	20·00
Comoro and Mayotte	95,617	66·40
French Somali Coast	65,000	11·23
St. Thomas and Prince Islands	58,907	163·63
Seychelles	24,811	159·04
Fernando Po, etc.	23,844	29·29
Ifni	20,000	20·73
St. Helena	3,747	79·72
Ascension	250	7·35
Total	144,368,361	12·55
North and Central America and West Indies—		
United States	105,710,620	35·55
Mexico	15,501,684	20·21
Canada	8,788,483	2·31
Cuba	2,889,004	65·34
Haiti	2,500,000	245·00
Guatemala	2,003,579	41·49
Salvador	1,501,000	113·86
Porto Rico	1,299,809	378·40
San Domingo	897,405	46·42
Jamaica	858,188	203·99
Nicaragua	638,119	12·97
Honduras	637,114	14·39
Costa Rica	468,373	20·36
Trinidad and Tobago	365,913	185·17

Country.	Population.	
	Number.	Density.[1]
North and Central America and West Indies—concluded.		
Newfoundland and Labrador	267,304	1·64
Martinique	244,439	634·91
Guadeloupe and Depen.	229,822	318·31
Barbados	156,312	941·64
Windward Islands	170,581	330·58
Leeward Islands	122,242	170·73
Alaska	55,036	0·09
Curaçao	53,702	133·26
Bahamas	53,031	12·04
British Honduras	45,317	5·27
Virgin Islands of U.S.A.[2]	26,051	197·36
Bermudas	20,127	1,059·32
Greenland (Danish)	13,449	0·29
Turks and Caicos Is.	5,612	25·05
Cayman Islands	5,253	59·02
St. Pierre and Miquelon	3,918	42·13
Total	145,531,487	18·19
South America—		
Brazil (incl. Acre)	30,645,296	9·35
Argentine Republic	8,698,516	7·54
Columbia (excl. Panama)	5,855,077	13·28
Peru	4,620,201	6·40
Chile	3,754,723	12·95
Bolivia	2,889,970	5·62
Venezuela	2,411,952	6·05
Ecuador	2,000,000	17·24
Uruguay	1,494,953	20·72
Paraguay	1,000,000	5·69
Panama Republic	401,428	12·40
British Guiana	307,391	3·44
Dutch Guiana	113,181	2·46
French Guiana	49,009	1·53
Panama Canal Zone	22,858	43·37
Falkland Islands	2,255	0·35
South Georgia	1,000	1·00
Total	64,267,810	9·45
Australasia and Polynesia—		
Commonwealth of Australia	5,436,794	1·83
New Zealand	1,218,913	11·73
Hawaii	255,912	39·68
Papua	276,888	3·06
Territory of New Guinea	555,000	6·19
Dutch New Guinea	200,000	1·65
Fiji	157,266	22·20
Solomon Islands (British)	150,650	13·69
New Hebrides	60,000	10·91
New Caledonia and Dependencies	55,700	7·70
Marshall Islands, etc. (Japanese mandate)	49,690	51·76
Western Samoa	37,157	29·48
French Establishments in Oceania	31,477	20·71
Gilbert and Ellice Is.	36,122	175·58
Tonga	23,572	61·22
Guam	14,246	63·32
Samoa (American)	8,324	81·61
Nauru Island	2,129	212·90
Total	8,569,840	2·46

[1] Number of persons per square mile. [2] Late Danish West Indies.

II.—VITAL STATISTICS.

The collection of vital statistics commenced in Canada, as in England, with the registration of baptisms, marriages and burials by the ecclesiastical authorities. These registers, maintained by the priests from the first settlement of the country, have made it possible for the vital statistics of the French colony to be compiled from the year 1610.[1] In the beginning, only one copy of such records was made, but in 1678 the Sovereign Council of Quebec ordered that in future such records should be made in duplicate, and that one copy, duly authenticated, should be delivered to the civil authorities. This arrangement was continued after the cession of the country to England, and was extended to the newly-established Protestant churches by an Act of 1793, but the registration among these latter remained seriously defective, both in Lower Canada and in the newly-established province of Upper Canada.

In English-speaking Canada, vital statistics were from the commencement seriously defective, the pioneer settlers often going out into the wilds far from the authority of government and the ministrations of religion. While a law existed in Upper Canada requiring ministers of religion to deposit duplicates of their registers of baptisms, marriages and deaths with the clerks of the peace for transmission to the provincial secretary, this law remained practically a dead letter. Again, the efforts made to secure records of births and deaths at the censuses of 1851 and 1861 produced most unsatisfactory and even ridiculous results, as was pointed out by Dr. J. C. Taché, secretary of the board of registration and statistics, in a memorial published in the report of the Canadian Minister of Agriculture for the year 1865. Nevertheless, in spite of the inherent unsoundness of securing at a point of time in a decennial census a record of births and deaths occurring over a considerable period of time, this method was persisted in down to 1911, when the obviously untrustworthy character of the results obtained led to the discarding of the data obtained at the inquiry. In Montreal and Toronto, for example, the local records showed 11,038 and 5,593 deaths respectively in the calendar year 1910, while the census records showed only 7,359 and 3,148 deaths respectively in the year from June 1, 1910, to May 31, 1911. Similar discrepancies were shown for other areas, proving the census data to be very incomplete.

The Dominion Government instituted in the early 80's a plan for compiling the annual mortuary statistics of cities of 25,000 population and over, by subsidizing local boards of health to supply the information under special regulations. A beginning was made with the five cities of Montreal, Toronto, Hamilton, Halifax and St. John. By 1891 the list had grown to 25, at a time when in most of the provinces the only birth and death statistics were those of the municipalities. Upon the organization of provincial bureaus of vital statistics, however, this work was abandoned, though a conference of Dominion and provincial officials, held in 1893, passed a resolution calling upon the provincial and Dominion authorities to co-operate in the work of collecting, compiling and publishing the vital statistics of the Dominion. This resolution had, however, no immediate practical results in securing accurate or comparable vital statistics.

Each province (except New Brunswick, which had no vital statistics) enacted its own legislation on vital statistics and administered such legislation according to its own individual methods. While the vital statistics of Ontario were published

[1] For a summary of the vital statistics of the Roman Catholic population from 1610 to 1883, see the Statistical Year Book of Quebec, 1921, English or French edition, p. 51. For details by years of this movement of population, see Vol. V of the Census of 1871, pp. 160-265 and Vol. IV of the Census of 1881, pp. 134-145.

in considerable detail annually from 1871, the arrangements for the collection of data were unsatisfactory. Only in 1906 was the publication of vital statistics begun in Prince Edward Island (no report for 1912 has ever been issued), and in Nova Scotia the publication of vital statistics dates only from 1909. Because of the *lacunæ*, and even more because of the incomparability of facts collected, of methods of collection and of standard of enforcement, Canadian vital statistics remained extremely unsatisfactory and impossible to be compiled on a national basis, as was pointed out by the 1912 commission on official statistics, which recommended that "for the Dominion, now engaged in building up its national unity, it is important that uniform data should render possible to statisticians the institution of true interprovincial and international comparisons. By effective co-operation of the provinces with the Dominion this object should be capable of attainment without sacrificing the liberty of each province to satisfy its own special statistical requirements."

The scheme of co-operation, thus outlined, has now been brought into effect as a consequence of the establishment of the Dominion Bureau of Statistics under the Statistics Act of 1918, which specifically provided that the Bureau should publish an annual report on vital statistics, and of the Dominion-Provincial conferences on vital statistics. The scheme was in the first instance drawn up in the Bureau and submitted to the various provinces; later a Dominion-Provincial conference on vital statistics was held in June, 1918, when a comprehensive and final discussion took place.

At the conferences of 1918, it was agreed: (1) that the model Vital Statistics Act prepared by the Dominion Bureau of Statistics, when accepted by the legislatures, should form the basis of the vital statistics legislation of the several provinces, thus securing uniformity and comparability; (2) that the provinces should undertake to obtain the returns of births, marriages and deaths on the prescribed forms as approved and adopted at the conference, the Dominion Bureau of Statistics to supply the forms free of charge; (3) that the provinces should forward to the Dominion Bureau of Statistics, at such times as might be agreed upon, either the original return of births, marriages and deaths, or certified transcriptions of the same; the Dominion Bureau of Statistics to undertake the mechanical compilation and tabulation of the same.

Under the scheme outlined above, the vital statistics of all the provinces, except Quebec, have been secured and compiled on a uniform basis for the year 1920, and with the commencement of 1921, it became possible to issue complete monthly statements for the eight provinces. The first annual report has been issued, covering the year 1921, and may be obtained on application to the Dominion Statistician.

Statistics showing births, marriages, deaths and natural increase in the nine provinces of Canada in recent years are given under the various headings in the following tables. The statistics for the eight provinces constituting the registration area of Canada are compiled for the provinces in the Dominion Bureau of Statistics, while the figures for Quebec are taken from the provincial returns. The totals for the nine provinces are approximately equivalent to what they would be for the Dominion as a whole, since the Yukon Territory and the Northwest Territories, which are not as yet covered by the new scheme of vital statistics, contain between them less than 1-700th of the population of the Dominion.

Two important considerations should be borne in mind by the students who use either these tables or provincial reports for comparative purposes.

First, in spite of the improvements recently effected, registration generally, and the registration of births in particular, is not universally carried out. The great extent of the country, and the isolation of many of its inhabitants, partly account for this unsatisfactory situation.

Secondly, the great differences in the age and sex distribution of the population in different provinces, as shown by the Census of 1921, make comparisons (of crude birth rates, for instance), as among the provinces unfair and misleading. Thus, for instance, in British Columbia in 1921, there were only 773 females of ages 15 to 44 to every 1,000 males of these ages, while in Quebec there were 1,017 and in Prince Edward Island 986. Evidently in view of the great disproportion between the sexes in British Columbia, the crude birth rate per 1,000 of population in that province cannot properly be compared with the crude birth rate in Quebec or Prince Edward Island. Again, in consequence of different age distributions of population in the different provinces—the Prairie Provinces, for instance, have a very young population because of the healthy young immigrants whom they attract—a comparison of crude death-rates of the provinces is misleading. In the Prairie Provinces, taken as a unit, only 126 per thousand of the 1911 population and 149 per thousand of the 1921 population had passed 45 years of age, while in Quebec 178, in Ontario 233 and in Prince Edward Island 264 per thousand of the population were in 1921 over 45 years of age. These latter provinces, having a much larger proportion of persons of advanced ages, will inevitably have a higher crude death rate per thousand of population than the Prairie Provinces.

The natural increase of the population of Canada is first dealt with, followed by detailed tables of births, marriages and deaths in the order named.

1.—Natural Increase.

Summary statistics of the births, marriages, deaths and natural increase per 1,000 of population are given for the years 1920, 1921 and 1922 by provinces in Table 38. The figures for 1922 are provisional and are not available for the province of Quebec, which is not included in the registration area.

The province of Quebec has perhaps the highest rate of natural increase per 1,000 of population of any civilized country, 20·0 in 1920 and 23·4 in 1921. This brings the average for Canada (exclusive of the territories) up to 15·6 in 1920 and 17·8 in 1921, while the remaining eight provinces, constituting the registration area, show as their rate of natural increase 13·7 for 1920 and 15·7 in 1921. In Australia the average rate of natural increase for the quinquennium 1917 to 1921 was 14·26 and in New Zealand 13·29, in England and Wales 7·20 and in Scotland 8·54 per thousand of population, so that the registration area of Canada compares quite favourably with other British countries. It must be remembered, however, that 1917 and 1918 were war years.

The rates of natural increase per annum per 1000 of mean population for other countries during recent years are as follows, the period on which observation is based being given in each case in parentheses: Denmark (1911-15), 12·87; Japan (1914-17), 12·26; Netherlands (1916-20), 12·25; Norway (1911-15), 11·82; Finland (1913-17), 9·14; Italy (1913-17), 8·11; Switzerland (1912-16), 7·89; Sweden (1916-20), 6·60; Spain (1915-19), 4·60; Ireland (1916-20), 3·89; France (1910-14), 0·43.

The present natural increase of the population of Canada is in the neighbourhood of 150,000 per annum, about one-third of which is due to Quebec.

The births, marriages, deaths and natural increase per thousand of population in Canadian cities having a population of 10,000 and over are given for the calendar year 1921 in Table 39.

38.—Summary of Births, Marriages, Deaths and Natural Increase, by Provinces for the calendar years 1920, 1921 and 1922.

Province.	Births.	Birth rate per 1,000 living.	Marriages.	Marriage rate per 1,000 living.	Deaths.	Death rate per 1,000 living.	Excess of births over deaths.	Rate of natural increase 1,000 per living.
1920.								
Prince Edward Island	2,301	25·9	607	6·8	1,279	14·4	1,022	11·5
Nova Scotia	13,181	25·3	4,411	8·5	7,563	14·5	5,621	10·8
New Brunswick	10,778	28·1	3,780	9·9	5,628	14·7	5,150	13·4
Ontario	72,297	25·0	29,361	10·2	40,410	14·0	31,887	11·0
Manitoba	18,322	30·6	6,068	10·1	6,511	10·9	11,811	19·7
Saskatchewan	22,839	31·1	5,320	7·2	5,918	8·1	16,921	23·0
Alberta	16,531	29·0	5,107	9·0	5,674	10·1	10,857	19·1
British Columbia	10,492	20·5	4,690	9·2	4,739	9·2	5,753	11·3
Total for Registration Area	166,741	26·0	59,344	9·4	77,722	12·3	89,022	13·7
Quebec	86,328	37·2	21,587	9·3	40,686	17·5	45,642	20·0
Canada (exclusive of the Territories)	**253,069**	**29·4**	**80,931**	**9·4**	**118,408**	**13·7**	**134,664**	**15·6**
1921.								
Prince Edward Island	2,156	24·3	518	5·9	1,209	13·6	947	10·7
Nova Scotia	13,021	24·9	3,550	6·8	6,420	12·3	6,601	12·6
New Brunswick	11,465	29·6	3,173	8·2	5,410	14·0	6,055	15·6
Ontario	74,152	25·3	24,871	8·5	34,551	11·8	39,601	13·5
Manitoba	18,478	30·3	5,310	8·7	5,388	8·8	13,090	21·5
Saskatchewan	22,493	30·0	5,101	6·7	5,596	7·4	16,897	22·6
Alberta	16,561	28·1	4,661	7·9	4,940	8·4	11,621	20·0
British Columbia	10,563	20·3	3,889	7·4	4,208	8·0	6,445	12·3
Total for Registration Area	168,979	26·3	51,073	8·0	67,722	10·6	101,257	15·7
Quebec	88,749	37·6	18,659	7·9	33,433	14·2	55,316	23·4
Canada (exclusive of the Territories)	**257,728**	**29·4**	**69,732**	**8·0**	**101,155**	**11·5**	**156,573**	**17·8**
1922.								
Prince Edward Island	2,055	23·4	579	6·6	1,089	12·4	966	11·0
Nova Scotia	12,591	23·8	3,167	6·0	6,616	12·5	5,975	11·3
New Brunswick	11,461	29·2	2,795	7·1	5,129	13·1	6,332	16·1
Ontario	71,264	23·9	23,360	7·8	33,969	11·4	37,295	12·5
Manitoba	17,694	28·3	4,808	7·7	5,747	9·2	11,947	19·1
Saskatchewan	21,897	27·9	5,061	6·4	6,016	7·7	15,881	20·2
Alberta	15,896	26·0	4,263	7·0	5,115	8·4	10,781	17·6
British Columbia	9,694	18·0	3,657	6·8	4,494	8·3	5,200	9·7
Total for Registration Area	162,552	24·8	47,690	7·3	68,175	10·4	94,377	14·4

NOTE.—All figures for 1922 are subject to revision.

Birth, marriage and death rates for 1920 and 1922 are calculated on the estimated population for 1920 and 1922, and for 1921 on the population as shown by the census of 1921.

39.—Summary of Births, Marriages, Deaths and Natural Increase, by Cities of 10,000 and over, for the calendar year 1921.

Cities.	Census population, 1921.	Births.	Marriages.	Deaths.	Excess of births over deaths.	Natural increase per 1,000 of population.
P. E. Island—						
Charlottetown	10,814	337	148	278	59	5·45
Nova Scotia—						
Halifax	58,372	1,836	922	903	933	15·98
Sydney	22,545	472	227	278	194	8·60
Glace Bay	17,007	255	114	223	32	1·88
New Brunswick—						
St. John	47,166	1,225	558	785	440	9·33
Moncton	17,488	620	204	235	385	22·01
Quebec—						
Montreal	618,506	21,136	5,984	10,293	10,843	17·53
Quebec	95,193	4,015	857	1,806	2,209	23·21
Verdun	25,001	839	93[1]	281	558	22·32
Hull	24,117	1,075	193[1]	258	817	33·88
Sherbrooke	23,515	785	175[1]	339	446	18·97
Three Rivers	22,367	955	182	392	563	25·17
Westmount	17,593	71	31[1]	138	−67	−3·81
Lachine	15,404	602	59[1]	193	409	26·55
Outremont	13,249	92	35[1]	80	12	0·91
St. Hyacinthe	10,859	308	94[1]	132	176	16·21
Shawinigan Falls	10,625	567	71[1]	174	393	36·99
Levis	10,470	357	46[1]	208	149	14·23
Ontario—						
Toronto	521,893	13,378	6,309	5,884	7,494	14·36
Hamilton	114,151	3,408	1,354	1,459	2,039	17·86
Ottawa	107,843	3,250	1,149	1,644	1,606	14·89
London	60,959	1,458	672	974	484	7·94
Windsor	38,591	1,326	653	465	861	22·31
Brantford	29,440	858	329	338	520	17·66
Kitchener	21,763	611	247	261	350	16·08
Kingston	21,753	648	262	430	218	10·02
Fort William	20,541	695	204	255	440	21·42
Peterborough	20,994	554	260	273	281	13·38
Sault Ste. Marie	21,092	706	245	265	441	20·91
St. Catharines	19,881	710	259	298	412	22·73
Guelph	18,128	424	226	316	108	5·96
Stratford	16,094	458	200	231	227	14·10
St. Thomas	16,026	385	170	223	162	10·11
Port Arthur	14,886	518	165	197	321	21·56
Sarnia	14,877	379	166	181	198	13·31
Niagara Falls	14,764	447	383	172	275	18·63
Chatham	13,256	391	212	231	160	12·07
Galt	13,216	359	125	158	201	15·21
Belleville	12,206	365	159	206	159	13·03
Owen Sound	12,190	332	109	185	147	12·06
Oshawa	11,940	409	111	154	255	21·36
North Bay	10,692	417	124	130	287	26·84
Brockville	10,043	258	114	177	81	8·07
Manitoba—						
Winnipeg	179,087	6,323	2,810	1,774	4,549	25·40
Brandon	15,397	492	234	214	278	18·06
St. Boniface	12,821	472	157	316	156	12·17
Saskatchewan—						
Regina	34,432	1,171	680	376	795	23·09
Saskatoon	25,739	938	572	332	606	23·54
Moose Jaw	19,285	695	393	213	482	24·99
Alberta—						
Calgary	63,305	2,086	1,074	722	1,364	21·55
Edmonton	58,821	2,136	1,059	782	1,354	23·02
Lethbridge	11,097	406	234	156	250	22·53
British Columbia—						
Vancouver	117,217	3,298	1,606	1,377	1,921	16·39
Victoria	38,727	926	426	437	489	12·63
New Westminster	14,495	441	177	227	214	14·76

[1] Catholics only.

2.—Births.

Almost throughout the civilized world, the birth rate has in the past generation been on the decline, though the consequent decline in the rate of natural increase has to a considerable extent been offset by a decline in the death rate.

The crude birth rate of England and Wales, for example, was 35·4 per 1,000 population on the average of the decennium 1871-80, 32·5 in 1881-90, and 29·9 in 1891-1900. In 1913 the birth rate was 24·1 and though it rose to 25·5 in 1920 it fell again to 22·4 in 1921.

Similarly in France, the crude birth rate declined from an average of 25·4 per 1,000 population in the 1870's, 23·9 in the 1880's and 22·2 in the 1890's to 20·4 in 1920. In Germany, again, the crude birth rate was 39·1 in the 1870's, 36·8 in the 1880's, 36·1 in the 1890's and 23·6 in 1922.

In Canada the birth rate still stands at the comparatively high figure of 29·4 per 1,000 in 1921—the last year for which complete figures are available. This is, however, largely due to the influence of Quebec, where the birth rate stood at the very high figure of 37·6 per 1,000 in 1921, as compared with 26·3 per 1,000 in the registration area, where the figures varied from 20·3 per 1,000 in British Columbia to 29·6 in New Brunswick, 30·0 in Saskatchewan and 30·3 in Manitoba.

Preliminary figures for 1922 show 162,552 living births, of which 158,738 were single births; 1,889 were twin births (3,778 infants); and there were 12 cases of triplets (36 infants). Complete statistics for 1920 and 1921 are given in Table **40.**

40.—Summary Analysis of Birth Statistics for the calendar years 1920 and 1921.

Province.	Living births.			Single births.	Number pairs of twins.	Number cases of triplets.	Illegitimates.	Birth rate per 1,000 population.
	Male.	Female.	Total.					
1920.								
Prince Edward Island...	1,172	1,129	2,301	2,257	22	–	71	25·9
Nova Scotia.....	6,740	6,439	13,179	12,872	152	1	453	25·3
New Brunswick.....	5,578	5,200	10,778	10,549	113	1	234	28·1
Ontario.....	37,044	35,253	72,297	70,655	791	20	1,387	25·0
Manitoba.....	9,399	8,923	18,322	17,845	231	5	328	30·6
Saskatchewan.....	11,836	11,003	22,839	22,221	303	4	219	31·1
Alberta.....	8,463	8,068	16,531	16,107	209	2	273	29·0
British Columbia.....	5,458	5,034	10,492	10,292	100	–	96	20·5
Total Registration Area.	85,690	81,049	166,739	162,798	1,921	33	3,061	26·0
Quebec.....	44,975	41,353	86,328	–[1]	–[1]	–[1]	–[1]	37·2
Canada (exclusive of the Territories).....	**130,665**	**122,402**	**253,067**	**162,798**[2]	**1,921**[2]	**33**[2]	**3,061**[2]	**29·4**
1921.								
Prince Edward Island...	1,073	1,083	2,156	2,104	26	–	49	24·3
Nova Scotia.....	6,695	6,326	13,021	12,702	158	1	396	24·9
New Brunswick.....	5,942	5,523	11,465	11,209	128	–	205	29·6
Ontario.....	38,307	35,845	74,152	72,548	784	12	1,592	25·3
Manitoba.....	9,455	9,023	18,478	18,025	222	3	420	30·3
Saskatchewan.....	11,620	10,873	22,493	21,873	304	4	258	30·0
Alberta.....	8,493	8,068	16,561	16,171	192	2	299	28·1
British Columbia.....	5,549	5,104	10,653	10,404	123	1	128	20·3
Total Registration Area.	87,134	81,845	168,979	165,036	1,937	23	3,347	26·3
Quebec.....	46,705	42,044	88,749	–[1]	–[1]	–[1]	– [1]	37·6
Canada (exclusive of the Territories).....	**133,839**	**123,889**	**257,728**	**165,036**[2]	**1,937**[2]	**23**[2]	**3,347**[2]	**29·4**

[1] These statistics are not available for the Province of Quebec.
[2] Partial totals lor eight provinces, figures for Quebec not being available.

Undoubtedly the test of birth rate most generally accepted by vital statisticians is supplied by the comparison of the total number of legitimate births with the total number of married women between the ages of 15 and 45, though a small number of births occur where the mothers are either below 15 or past the 45th birthday. This test is applied to the registration area of Canada in Table **41.**

41.—Births per 1,000 Married Women of Child-bearing Age, by Provinces, 1921.

Province.	Married women between the ages of 15 and 45 years.	Legitimate births.	Legitimate births per 1,000 married women of child-bearing age.
	No.	No.	No.
Prince Edward Island	8,610	2,107	245
Nova Scotia	57,916	12,625	218
New Brunswick	44,333	11,260	254
Ontario	379,307	72,560	191
Manitoba	82,325	18,058	219
Saskatchewan	104,348	22,235	213
Alberta	83,353	16,262	195
British Columbia	73,039	10,525	144
Canada (registration area)	833,231	165,632	199
Quebec	265,488	88,749[1]	334[1]
Canada (exclusive of Territories)	**1,098,719**	**254,381**[1]	**232**[1]

[1] No statistics of illegitimate births in Quebec are available. The total number of births in Quebec has accordingly been used, though as a result the fertility of Quebec and of Canadian married women is somewhat overestimated.

Table **42** shows the number of living births reported for each province in 1921 which were male and female, together with the proportion of male to female births. Prince Edward Island is the only province in which the number of female births exceeded male births. The preliminary figures for 1922 indicate that among every 1,000 born in 1922, 512 were males and 488 females, as compared with a proportion of 516 to 484 in 1921 and 514 to 486 in 1920.

42.—Births by Sex and Ratio of Males to Females, 1921.

Province.	Births, 1921.					
	Total.	Males.		Females.		Males to 1,000 females.
		Number.	Per cent of total.	Number.	Per cent of total.	
Prince Edward Island	2,156	1,073	49·8	1,083	50·2	999
Nova Scotia	13,021	6,695	51·4	6,326	48·6	1,058
New Brunswick	11,465	5,942	51·8	5,523	48·2	1,073
Ontario	74,152	38,307	51·7	35,845	48·3	1,069
Manitoba	18,478	9,455	51·2	9,023	48·8	1,048
Saskatchewan	22,493	11,620	51·7	10,873	48·3	1,069
Alberta	16,561	8,493	51·3	8,068	48·7	1,053
British Columbia	10,653	5,549	52·1	5,104	47·9	1,087
Total Registration Area	158,979	87,134	51·6	81,845	48·4	1,065
Quebec	88,749	46,705	52·6	42,044	47·4	1,111
Canada (exclusive of the Territories)	**257,728**	**138,839**	**51·9**	**123,889**	**48·1**	**1,080**

Illegitimacy.—The ratio of illegitimate to total births is, generally speaking, low in Canada as compared with other countries.

Out of 168,979 living births in the registration area of Canada 3,347, or 2 p.c., were returned in 1921 as the issue of unmarried mothers. Preliminary statistics for 1922 show that out of 162,552 births reported in the registration area, 3,308 or 2 p.c., were illegitimate. Statistics are given in Table **43.**

43.—Illegitimate Births in Registration Area by Age of Mother and by Provinces, 1921 and 1922.

Age of mother.	P.E.I.	N.S.	N.B.	Ont.	Man.	Sask.	Alta.	B.C.	Total.
1921.									
Under 15 years	1	–	3	11	4	5	–	2	26
15–19	14	151	72	551	144	106	1	50	1,089
20–24	19	168	84	528	154	66	1	45	1,065
25–29	7	43	26	208	56	31	1	13	385
30–34	3	16	7	112	30	30	–	14	212
35–39	–	9	7	63	19	11	–	2	111
40–44	–	5	3	15	9	5	–	2	39
45–49	–	–	–	4	2	–	–	–	6
Not given	5	4	3	100	2	4	296	–	414
Male	16	201	113	796	222	122	154	68	1,692
Female	33	195	92	796	198	136	145	60	1,655
Total births	**49**	**396**	**205**	**1,592**	**420**	**258**	**299**	**128**	**3,347**
Per cent of total births	2·3	3·0	1·8	2·1	2·3	1·1	1·8	1·2	2·0
1922.									
Under 15 years	–	2	3	20	5	1	6	2	39
15–19	14	182	89	544	140	105	105	51	1,230
20–24	16	171	78	479	145	75	104	29	1,097
25–29	10	58	26	192	56	27	36	15	420
30–34	5	24	8	102	37	21	22	9	228
35–39	–	12	8	58	20	13	17	3	131
40–44	–	5	5	14	6	3	4	–	37
45–49	–	1	–	1	1	–	–	–	3
Not given	4	–	4	98	–	2	15	–	123
Male	23	236	115	822	210	131	169	45	1,751
Female	26	219	106	686	200	116	140	64	1,557
Total births	**49**	**455**	**221**	**1,508**	**410**	**247**	**309**	**109**	**3,308**
Per cent of total births	2·4	3·6	1·9	2·1	2·3	1·1	1·9	1·1	2·0

NOTE.—The figures for 1922 are subject to revision.

Stillbirths.—Statistics of the number of children born dead in 1921 and 1922 are shown below for the registration area of Canada, according to the status and age of the mother. In Quebec in 1921 there were in all 2,837 still-births.

44.—Stillbirths in Registration Area by Age and Status of Mother, and by Provinces, 1921 and 1922.

Age of mother.	Stillbirths, Registration Area.									
	Unmarried mothers.	Married mothers.								Total.
		P.E.I.	N.S.	N.B.	Ont.	Man.	Sask.	Alta.	B.C.	
1921.										
Under 15 years of age	2	–	–	–	–	–	1	–	–	3
15 years	3	–	–	–	–	–	1	–	–	4
16 "	10	–	2	3	5	1	2	–	1	24
17 "	11	–	6	7	12	4	4	–	–	44
18 "	26	1	5	6	43	11	11	–	–	103
19 "	16	–	8	8	78	11	9	–	2	132
20 "	21	–	12	4	92	10	16	–	7	162
21 "	10	3	18	19	85	10	20	–	4	169
22 "	18	5	12	11	125	21	23	–	4	219
23 "	14	1	15	8	127	14	18	–	6	203
24 "	16	3	19	10	157	20	14	–	4	243
25 "	9	–	23	12	158	25	20	–	11	258
26 "	12	2	21	10	173	21	17	–	7	263
27 "	6	3	12	11	106	35	22	–	9	204
28 "	3	2	16	10	150	23	29	–	11	244
29 "	–	3	22	8	119	16	16	–	9	193
30 years and over	34	24	164	87	1,284	253	276	–	76	2,198
Unknown	29	11	141	100	626	111	129	399	175	1,721
Total	**240**	**58**	**496**	**314**	**3,340**	**586**	**628**	**399**	**326**	**6,387**
1922.										
Under 15 years of age	5	–	–	–	–	–	–	–	–	5
15 years	5	–	–	–	1	–	–	–	–	6
16 "	11	–	2	–	4	–	–	–	1	18
17 "	15	1	5	2	19	2	1	1	1	47
18 "	22	–	9	8	45	13	6	7	1	111
19 "	16	–	13	9	54	10	10	12	1	125
20 "	13	1	12	2	89	11	16	7	4	155
21 "	7	2	11	8	97	14	22	17	4	182
22 "	9	2	27	9	99	24	20	12	–	202
23 "	12	–	15	6	130	20	16	18	10	227
24 "	9	2	15	11	137	18	23	19	14	248
25 "	13	3	28	15	108	29	20	17	2	235
26 "	5	2	21	13	146	25	13	12	13	250
27 "	2	3	18	11	157	28	22	14	9	264
28 "	3	5	19	11	119	34	32	18	6	247
29 "	2	2	23	14	107	21	20	22	6	217
30 years and over	25	27	197	112	1,310	314	255	182	91	2,513
Unknown	18	13	1	28	388	3	145	69	132	797
Total	**192**	**63**	**416**	**259**	**3,010**	**566**	**621**	**427**	**295**	**5,849**

NOTE.—Figures for 1922 are subject to revision.

Birth Rates in Various Countries.—The relative position occupied by Canada and its individual provinces among the countries of the world with respect to crude birth rate (the annual number of births per 1,000 of population) is shown in Table **45.**

45.—Crude Birth Rates of Various Countries in Recent Years.

Country.	Year.	Crude Birth Rate.	Country.	Year.	Crude Birth Rate.
Russia, European	1909	44·0	Finland	1920	25·1
Rumania	1914	42·5	Switzerland	1920	25·1
Bulgaria	1911	40·2	Australia	1921	25·0
Serbia	1912	38·0	Prussia	1921	24·9
Quebec	1921	37·6	Norway	1921	24·6
Chile	1914	37·0	South Australia	1921	24·1
Ceylon	1920	36·5	Ontario	1922	23·9
Japan	1921	35·1	Nova Scotia	1922	23·8
Jamaica	1919	34·1	United States[1]	1920	23·7
Portugal	1920	32·2	Germany	1922	23·6
Spain	1921	30·4	Prince Edward Island	1922	23·4
Hungary	1922	29·4	Western Australia	1921	23·4
Canada	**1921**	**29·4**	New Zealand	1921	23·3
New Brunswick	1922	29·2	Victoria	1921	23·2
Union of S. Africa (whites)	1920	28·9	United Kingdom	1921	22·5
Manitoba	1922	28·3	England and Wales	1921	22·4
Netherlands	1920	28·2	Austria	1920	22·1
Saskatchewan	1922	27·9	Belgium	1920	21·4
Tasmania	1921	27·0	Sweden	1921	21·4
Queensland	1921	26·6	France	1920	20·4
New South Wales	1921	25·9	Ireland	1921	20·2
Denmark	1921	25·5	Italy	1917	19·0
Scotland	1921	25·2	British Columbia	1922	18·0

[1]Birth Registration Area.

3.—Marriages.

Nearly a century ago it was observed in the United Kingdom that the number of marriages tended to be high when the price of wheat was low and to be low when the price of wheat was high. This was quite naturally the case among a population, the majority of which was living at a comparatively low standard of comfort, and where the staple food, as a consequence, was the chief factor in the cost of living.

More recently, the curve showing marriage rates has in the United Kingdom and in other English-speaking countries ceased to bear any constant relation to the price of wheat, the staple food of the people, though it still does so in poorer countries. Its place in influencing the marriage rate, has, however, been taken by the general level of prosperity. Marriages in such countries as the United Kingdom, the United States, Canada and Australia tend to increase in "good times" and to diminish in "hard times," when great numbers of those who are contemplating marriage are led to postpone such marriage until the advent of better industrial conditions.

Even in the short period covered by the vital statistics of the registration area of Canada, the truth of the above statement is supported by the evidence. In 1920, a year of great prosperity, the marriages occurring in the registration area of Canada numbered 59,344 or 9·4 per thousand of population; in 1921 they declined to 51,073 or 8·0 per thousand, and in 1922 to 47,690 or 7·3 per thousand of population, largely owing to the industrial depression in these years. It should also be mentioned, of course, that there doubtless occurred in 1920 a number of deferred marriages, which under more normal conditions would have occurred in the war years. Summary statistics of marriages contracted in 1921 and 1922 appear in Table **46**.

46.—Marriages and Marriage Rates, by Provinces, 1921 and 1922.

Provinces.	Population in thousands, 1921.	Marriages, 1921.		Population in thousands, 1922.	Marriages, 1922.	
		No.	Per 1,000 pop.		No.	Per 1,000 pop.
Prince Edward Island	89	518	5·8	88	579	6·6
Nova Scotia	524	3,550	6·8	528	3,167	6·0
New Brunswick	388	3,173	8·2	392	2,795	7·1
Ontario	2,934	24,871	8·5	2,981	23,360	7·8
Manitoba	610	5,310	8·7	626	4,808	7·7
Saskatchewan	753	5,101	6·7	786	5,061	6·4
Alberta	589	4,661	7·9	611	4,263	7·0
British Columbia	525	3,889	7·4	539	3,657	6·8
Canada (registration area)	6,417	51,073	8·0	6,551	47,690	7·3
Quebec	2,361	18,659	7·9	–	–	–
Canada (exclusive of the Territories)	**8,775**	**69,732**	**8·0**	–	–	–

NOTE.—The figures for 1922 are preliminary.

Conjugal Condition of Brides and Grooms.—Statistics showing the previously existing conjugal condition of the contracting parties in the 51,073 marriages which took place in the registration area in 1921 are presented in Table 47.

47.—Previous Conjugal Condition of Brides and Grooms, 1921.

Provinces.	Marriages between								
	Bachelors and			Widowers and			Divorced Men and		
	Spinsters.	Widows.	Divorced Women.	Spinsters.	Widows.	Divorced Women.	Spinsters.	Widows.	Divorced Women.
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Prince Edward Island	446	17	–	28	25	–	1	1	–
Nova Scotia	2,965	154	10	227	168	3	18	4	1
New Brunswick	2,607	141	23	221	141	7	19	8	6
Ontario	20,958	1,052	49	1,657	1,032	20	68	28	7
Manitoba	4,438	254	40	307	215	6	38	9	3
Saskatchewan	4,240	303	26	289	204	2	24	11	2
Alberta	3,787	276	40	276	220	10	37	7	8
British Columbia	2,975	247	92	243	186	27	67	19	33
Canada (registration area)	**42,416**	**2,444**	**280**	**3,248**	**2,191**	**75**	**272**	**87**	**60**

Nativity of Brides and Grooms.—It may be noted in Table 48 that more than 50 p.c. of brides and grooms in the western provinces were not Canadian born, while in the eastern provinces in most instances more than 70 p.c. were native born. In Prince Edward Island 97 p.c. of contracting parties were Canadian born. In Nova Scotia and New Brunswick more than 80 p.c. were native born. Altogether 40·1 p.c. of the grooms and 36·7 p.c. of the brides were born outside of Canada.

48.—Nativity, by Percentages, of Persons Married in the Registration Area, by Provinces, 1921.

Provinces.	Population in thousands.	Marriages.		Per cent distribution of Grooms and Brides by Nativity.					
		Total.	Per 1,000 population.	Born in province of residence		Born in other provinces.		Born elsewhere.	
				Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.
Prince Edward Island	89	518	5·8	92·3	94·6	5·0	1·9	2·7	3·5
Nova Scotia	524	3,550	6·8	76·3	81·3	6·4	4·5	17·3	14·2
New Brunswick	388	3,173	8·2	73·4	78·0	10·1	8·4	16·5	13·6
Ontario	2,924	24,871	8·5	63·6	66·7	5·6	4·7	30·8	28·6
Manitoba	610	5,310	8·7	26·4	37·2	18·1	14·1	55·5	48·7
Saskatchewan	758	5,101	6·7	7·1	15·6	31·4	28·1	61·5	56·3
Alberta	589	4,661	7·8	7·0	14·2	26·1	25·1	66·9	60·7
British Columbia	525	3,889	7·4	13·7	18·3	22·6	20·5	63·7	61·2
Canada (registration area)	**6,417**	**51,073**	**7·9**	**46·9**	**52·0**	**13·0**	**11·3**	**40·1**	**36·7**

Marriage Rates in Various Countries.—For comparative purposes, the crude marriage rate per 1,000 of population in various countries of the world is shown for the indicated years in Table 49.

49.—Crude Marriage Rates of Various Countries in Recent Years.

Country.	Year.	Crude Marriage Rate.	Country.	Year.	Crude Marriage Rate.
Prussia	1921	11·9	**Canada**	**1921**	**7·9**
Germany	1922	11·1	Quebec	1921	7·9
Hungary	1922	10·5	Tasmania	1921	7·8
Serbia	1911	10·3	Queensland	1921	7·8
Spain	1921	10·3	Ontario	1922	7·8
United Kingdom	1919	9·9	Manitoba	1922	7·7
Union of South Africa (whites)	1920	9·9	France	1913	7·5
Bulgaria	1911	9·4	Austria	1912	7·4
Netherlands	1921	9·2	New Brunswick	1922	7·1
Japan	1921	9·1	Alberta	1922	7·0
Switzerland	1920	9·0	Norway	1921	6·9
Victoria	1921	8·9	British Columbia	1922	6·8
South Australia	1921	8·8	Finland	1920	6·7
Denmark	1920	8·8	Sweden	1921	6·6
New South Wales	1921	8·8	Prince Edward Island	1922	6·6
New Zealand	1921	8·7	Saskatchewan	1922	6·4
Australia	1921	8·6	Ireland	1919	6·1
Rumania	1914	8·5	Nova Scotia	1922	6·0
England and Wales	1921	8·4	Chile	1907–16	5·6
Belgium	1912	8·0	Ceylon	1920	5·2
Scotland	1921	8·0	Portugal	1918	5·0
Western Australia	1921	8·0	Italy	1920	4·1
Russia, European	1909	7·9	Jamaica	1909-12	4·1

4.—Deaths.

Within the past century and more especially within the past generation there has occurred generally throughout the countries of the white world a notable decline in the death rate, except where man has brought death upon himself through wars and the aftermath of wars. How far this decline has been due to advances in medical science, how far to better sanitation and how far to the improvement in the general conditions of living as a result of the increase in the productive power of humanity, is in dispute, but concerning the facts there is no doubt.

Perhaps the most impressive testimony regarding this decline in the death rate is furnished by the mortality statistics of Sweden, where vital statistics have been kept with great accuracy for the whole nation ever since 1750. There the crude death rate declined from an average of 35·67 per 1,000 in the decade 1751-60 to 14·29 in the decade 1911-20, and to 12·78 (preliminary figure) in 1922.

Similarly, in England, the crude death rate, which was 22·6 per 1,000 in the 60's and 21·3 in the 70's and 18·2 in the 90's of the last century, declined to 15·5 in 1906, 13·8 in 1913 and 12·1 in 1921. In Scotland, again, the rate was 22·1 in the 60's, 21·8 in the 70's, 18·5 in the 90's, 16·4 in 1906 and 13·6 in 1921.

Of course, the preceding statements are not to be taken to mean that every year will show a decline in the death rate as compared with the preceding year. There will always be years of specially high mortality, as for instance 1918, when the death rate in Ontario, the most populous of the provinces included in the registration area of Canada, was 15·3 per 1,000 as against 12·0 in 1917 and 11·9 in 1919. Over a decade, however, these idiosyncrasies of individual years are reduced to negligibility, and it remains true that from decade to decade there is, generally speaking and under normal conditions, a decline in the crude death rate of the countries of the white world.

As for Canada, there is little doubt but that the decline in the death rate which has been observed in other countries has also occurred among ourselves, though on account of the improved registration in recent years the diminution of the death rate is not apparent from the statistics collected. In Quebec, however, where the same methods of registration have been employed for many years, the mortality has shown a decline in recent years from 17·89 per 1,000 in 1910 to 14·15 per 1,000 in 1921, largely on account of the reduction in infant mortality.

The total deaths and death rates are given in Table **50** for the registration area of Canada, by provinces. It is worthy of note that the total deaths in 1921 and 1922 (preliminary figures for the latter year) show a considerable decline as compared with 1920, the first year in which the statistics are available on a comparative basis for the area.

50.—Deaths and Death Rates by Provinces, 1920, 1921 and 1922.

Provinces.	Population (in thousands).			Total Deaths.			Crude death rate per 1,000 population.		
	1920 estim.	1921 census.	1922 estim.	1920.	1921.	1922.	1920.	1921.	1922.
Prince Edward Island	89	89	88	1,279	1,209	1,089	14·4	13·6	12·4
Nova Scotia	520	524	528	7,563	6,420	6,616	14·5	12·3	12·5
New Brunswick	384	388	392	5,628	5,410	5,129	14·7	13·9	13·1
Ontario	2,889	2,934	2,981	40,410	34,551	33,969	14·0	11·8	11·4
Manitoba	598	610	626	6,511	5,388	5,747	10·9	8·8	9·2
Saskatchewan	735	757	786	5,918	5,596	6,016	8·0	7·4	7·7
Alberta	570	588	611	5,674	4,940	5,115	10·0	8·4	8·4
British Columbia	511	525	539	4,739	4,208	4,494	9·3	8·0	8·3
Canada (registration area)	6,296	6,415	6,551	77,722	67,722	68,175	12·3	10·6	10·4
Quebec	2,323	2,361	–	40,686	33,433	–	17·5	14·2	–
Canada (exclusive of Territories)	**8,619**	**8,776**	–	**118,408**	**101,155**	–	**13·7**	**11·5**	–

Mortality by Sex.—According to Table **51**, the number of male children born in 1921 in the registration area exceeded the total male deaths for the year by 50,723, while the gain in the female population during the same period was 50,534.

That is to say, while the number of male children born exceeded the females by 5,289, yet, owing to the higher mortality among males as compared to females, 98 : 77, the net increase for the year of the male over the female population in the registration area was reduced to 189.

51.—Excess of Births over Deaths, by Provinces, for each Sex and by Totals, 1921.

Provinces.	Males.			Females.			Both sexes.
	Births.	Deaths.	Excess of births over deaths.	Births.	Deaths.	Excess of births over deaths.	Excess of births over all deaths.
Prince Edward Island..	1,073	619	454	1,083	590	493	947
Nova Scotia.....	6,695	3,372	3,323	6,326	3,048	3,278	6,601
New Brunswick.....	5,942	2,858	3,084	5,523	2,552	2,971	6,055
Ontario.....	38,307	18,062	20,245	35,845	16,489	19,356	39,601
Manitoba.....	9,455	2,964	6,491	9,023	2,424	6,599	13,090
Saskatchewan.....	11,620	3,078	8,542	10,873	2,518	8,355	16,897
Alberta.....	8,493	2,858	5,635	8,068	2,082	5,986	11,621
British Columbia.....	5,549	2,600	2,949	5,104	1,608	3,496	6,445
Total.....	**87,134**	**36,411**	**50,723**	**81,845**	**31,311**	**50,534**	**101,257**

Mortality by Cause.—In Table 52 are shown the deaths in the registration area in 1921 and 1922 by twenty leading causes. In both years diseases of the heart headed the list with 8·9 p.c. in 1921 and 9·6 p.c. in 1922—a significant increase. Pneumonia came second with 8·8 p.c. in 1921 and 9·3 p.c. in 1922, cancer in third place with 7·13 p.c. in 1921 and 7·47 p.c. in 1922, and tuberculosis in fourth place with 7·07 p.c. in 1921 and 6·76 p.c. in 1922. While a comparison covering only two consecutive years must be considered as of a very tentative nature, the increases in heart disease and cancer must be regarded as very significant, especially since similar increases are occurring in other countries. On the other hand, the decline in tuberculosis must be considered as altogether satisfactory.

52.—Deaths in the Registration Area of Canada from Twenty Leading Causes, 1921 and 1922.

Causes of Death.	P.E.I.	N.S.	N.B.	Ont.	Man.	Sask.	Alta.	B.C.	Total.
1921.									
Diseases of heart.....	96	563	420	3,394	429	339	308	472	6,021
Pneumonia.....	97	505	500	3,005	563	498	446	352	5,966
Cancer.....	77	480	279	2,585	427	309	281	388	4,826
Tuberculosis, lungs.....	112	579	344	1,731	305	256	260	316	3,903
Tuberculosis, other organs	16	123	69	352	115	66	53	92	886
Premature birth.....	20	195	141	1,630	330	460	310	164	3,250
Diarrhoea and enteritis...	42	241	295	1,619	377	326	243	75	3,218
Senility.....	126	614	389	1,404	82	136	98	65	2,914
Cerebral haemorrhage, apoplexy.....	47	211	175	1,553	177	143	97	197	2,600
Diseases of arteries.....	15	161	88	1,824	127	99	84	157	2,555
Congenital debility.....	27	291	149	1,029	185	247	252	85	2,265
Nephritis.....	44	196	126	1,145	116	140	111	163	2,041
Diphtheria.....	16	63	56	653	148	172	156	33	1,297
Influenza.....	20	70	84	509	57	69	67	64	940
Bronchitis.....	15	87	46	510	71	83	47	46	905
Congenital malformations.	9	49	35	493	81	90	60	45	862
Paralysis.....	36	144	96	382	52	18	48	33	809
Appendicitis.....	11	56	47	344	72	123	107	56	816
Anaemia, chlorosis.....	9	44	37	511	34	34	31	35	735
Drowning.....	6	39	30	358	54	47	33	111	678
All other causes.....	368	1,709	2,004	9,520	1,586	1,941	1,848	1,259	20,235
Total.....	**1,209**	**6,420**	**5,410**	**34,551**	**5,388**	**5,596**	**4,940**	**4,208**	**67,722**

52.—Deaths in the Registration Area of Canada from Twenty Leading Causes, 1921 and 1922—concluded.

Causes of Death.	P.E.I.	N.S.	N.B.	Ont.	Man.	Sask.	Alta.	B.C.	Total.
1922.									
Diseases of heart	111	578	487	3,752	442	368	318	534	6,590
Pneumonia	107	659	481	3,135	561	539	443	395	6,320
Cancer	85	534	321	2,605	445	345	317	440	5,092
Tuberculosis, lungs	96	559	354	1,629	307	254	238	320	3,757
Tuberculosis, other organs	15	132	63	347	69	86	65	75	852
Premature birth	20	228	188	1,672	366	444	370	189	3,477
Diseases of arteries	20	140	110	2,044	157	124	124	154	2,873
Diarrhoea and enteritis	23	165	207	1,112	520	421	285	106	2,839
Senility	142	561	337	1,266	82	161	82	60	2,691
Cerebral haemorrhage, apoplexy	45	278	169	1,586	168	106	89	148	2,589
Influenza	24	218	196	961	183	293	269	209	2,353
Nephritis	33	210	134	1,100	179	160	126	156	2,098
Congenital debility	26	217	170	874	172	258	148	73	1,938
Diphtheria	7	45	44	410	150	199	134	23	1,012
Congenital malformations	3	55	33	491	94	101	73	53	903
Bronchitis	13	95	39	445	73	54	83	40	842
Appendicitis	4	57	39	331	89	125	125	66	836
Anaemia chlorosis	13	44	31	525	50	32	33	47	775
Paralysis	22	115	100	368	37	25	27	40	734
Diabetes mellitus	8	52	45	370	58	44	55	74	706
All other causes	272	1,674	1,581	8,946	1,545	1,877	1,711	1,292	18,898
Total	**1,089**	**6,616**	**5,129**	**33,969**	**5,747**	**6,016**	**5,115**	**4,494**	**68,175**

Tuberculosis.—Deaths assigned to tuberculous affections numbered in the aggregate, 4,789 in 1921 and 4,608 in 1922, the latter figures being subject to revision. The males numbered 2,439 in 1921 and 2,353 in 1922; the females, 2,350 and 2,255 respectively. The mortality rate for the registration area was 747 per million people in 1921 and 703 per million (provisional) in 1922. In England the crude rate per million population was 1,131 in 1920. Tuberculosis caused in 1921 out of every 1,000 deaths, 106 in Prince Edward Island, 109 in Nova Scotia, 76 in New Brunswick, 60 in Ontario, 78 in Manitoba, 58 in Saskatchewan, 63 in Alberta and 97 in British Columbia.

53.—Deaths from Tuberculosis in the Registration Area, by Sex, 1921 and 1922.

Sites.	P.E.I.	N.S.	N.B.	Ont.	Man.	Sask.	Alta.	B.C.	Total.
1921.									
Respiratory system. Total	112	579	344	1,731	305	256	260	316	3,903
M	57	274	147	856	165	131	133	211	1,974
F	55	305	197	875	140	125	127	105	1,929
Meninges and central nervous system....Total	7	52	31	119	50	18	17	46	340
M	2	38	17	67	27	11	9	26	197
F	5	14	14	52	23	7	8	20	143
Intestines and peritoneum.....Total	4	22	18	85	23	17	20	16	205
M	3	10	8	31	11	4	12	6	85
F	1	12	10	54	12	13	8	10	120
Vertebral column ...Total	2	13	6	28	6	5	3	7	70
M	–	11	3	12	3	3	3	5	40
F	2	2	3	16	3	2	–	2	30
Joints.....Total	–	3	–	14	4	2	2	4	29
M	–	2	–	6	1	1	–	2	12
F	–	1	–	8	3	1	2	2	17
Other organs.....Total	2	11	10	48	11	6	5	6	99
M	–	7	6	26	5	2	3	4	53
F	2	4	4	22	6	4	2	2	46
Disseminated.....Total	1	22	4	58	21	18	6	13	143
M	–	8	2	32	9	14	3	10	78
F	1	14	2	26	12	4	3	3	65
Total, both sexes	**128**	**702**	**413**	**2 083**	**420**	**322**	**313**	**408**	**4,789**
M	62	350	183	1,030	221	166	163	264	2,439
F	66	352	230	1,053	199	156	150	144	2,350

53.—Deaths from Tuberculosis in the Registration Area, by Sex, 1921 and 1922—concluded.

Sites.		P.E.I.	N.S.	N.B.	Ont.	Man.	Sask.	Alta.	B.C.	Total.
1922.										
Respiratory system	M	50	266	177	797	149	127	121	214	1,901
	F	46	293	176	832	158	127	117	106	1,855
Meninges and central nervous system	M	2	38	7	62	17	15	12	16	169
	F	1	27	9	45	10	14	7	10	123
Intestines and peritoneum	M	1	10	9	35	3	11	8	12	89
	F	5	10	14	59	11	8	10	8	125
Vertebral column	M	2	3	4	15	1	4	4	5	38
	F	–	5	1	16	4	2	2	1	31
Joints	M	1	6	1	4	–	2	1	5	20
	F	1	2	–	9	2	–	2	–	16
Other organs	M	–	4	6	24	2	8	9	3	56
	F	–	8	2	22	4	1	3	3	43
Disseminated	M	–	9	5	27	10	15	4	10	80
	F	2	10	5	29	5	6	3	2	62
Total, both sexes		**111**	**691**	**416**	**1,976**	**376**	**340**	**303**	**395**	**4,608**
	M	56	336	209	964	182	182	159	265	2,353
	F	55	355	207	1,012	194	158	144	130	2,255

NOTE.—The figures for 1922 are subject to revision.

Cancer.—Deaths assigned to cancer aggregated in 1921 4,826, 2,309 males and 2,517 females, and in 1922 5,092, 2,414 males and 2,678 females. The crude rate was in 1921, 752 and in 1922, 777 per million population. Out of every 1,000 deaths in the registration area in 1922, 75 were assigned to cancer as compared with 71 in 1921. By provinces, the number of deaths due to cancer per 1,000 total deaths were in 1922 as follows, figures for 1921 being given in parentheses for comparative purposes: Prince Edward Island, 78 (64); Nova Scotia, 81 (75); New Brunswick, 63 (52); Ontario, 77 (75); Manitoba, 77 (79); Saskatchewan, 57 (55); Alberta, 62 (57); British Columbia, 98 (92).

54.—Deaths from Cancer in the Registration Area, by Sex, 1921 and 1922.

Sites.		P.E.I.	N.S.	N.B.	Ont.	Man.	Sask.	Alta.	B.C.	Total, registration area.
1921.										
Buccal cavity	M	3	13	6	87	9	11	5	13	147
	F	–	1	1	11	3	–	1	–	17
Stomach and liver	M	21	96	76	483	118	89	85	90	1,058
	F	13	90	47	377	78	48	28	49	730
Peritoneum, intestines, and rectum	M	5	33	11	178	29	18	32	32	338
	F	7	41	17	213	24	18	16	38	374
Female genital organs	F	4	38	23	236	43	29	20	40	433
Breast	F	6	19	20	235	21	31	16	29	377
Skin	M	1	11	7	41	4	3	6	5	78
	F	–	3	–	25	–	4	–	–	32
Unspecified organs	M	9	65	35	387	58	41	40	53	688
	F	8	70	36	312	40	17	32	39	554
Totals	M	39	218	135	1,176	218	162	168	193	2,309
	F	38	262	144	1,409	209	147	113	195	2,517
Total, both sexes		**77**	**480**	**279**	**2,585**	**427**	**309**	**281**	**388**	**4,826**

54.—Deaths from Cancer in the Registration Area, by Sex, 1921 and 1922—concluded.

Sites.		P.E.I.	N.S.	N.B.	Ont.	Man.	Sask.	Alta.	B.C.	Total, registration area.
1922.										
Buccal cavity	M	5	20	13	80	14	13	10	12	167
	F	–	4	1	14	–	2	–	4	25
Stomach and liver	M	18	109	64	476	109	97	78	103	1,054
	F	14	112	60	391	87	56	43	73	836
Peritoneum, intestines, and rectum	M	6	23	23	203	33	29	23	34	374
	F	5	44	30	235	22	14	29	36	415
Female genital organs	F	4	36	15	243	46	25	36	45	450
Breast	F	11	34	23	231	33	24	21	37	414
Skin	M	2	19	7	49	7	4	10	6	104
	F	1	4	5	27	–	1	2	2	42
Unspecified organs	M	9	67	43	379	60	53	45	59	715
	F	10	62	37	277	34	27	20	29	496
Totals	M	49	238	150	1,187	223	196	166	214	2,414
	F	45	296	171	1,418	222	149	151	226	2,678
Total, both sexes		**85**	**534**	**321**	**2,605**	**445**	**345**	**317**	**440**	**5,092**

NOTE.—The figures for 1922 are subject to revision.

Comparative Death Rates of Different Countries.—In Table **55** will be found a comparative statement of the crude death rates of various countries and provinces for the latest available year. It is worthy of note that three Canadian provinces have the lowest death rates in the list, and that the registration area of Canada has a lower death rate than any other leading country except Australia and New Zealand. The low death rates are in all three cases due in part to a favourable age distribution of population.

55.—Crude Death Rates of Various Countries in Recent Years.

Country.	Year.	Crude Death Rate.	Country.	Year.	Crude Death Rate.
Saskatchewan	1922	7·7	New Brunswick	1922	13·1
British Columbia	1922	8·3	Belgium	1920	13·4
Alberta	1922	8·4	Scotland	1921	13·6
New Zealand	1921	8·7	Prussia	1921	13·6
Manitoba	1922	9·2	Quebec	1921	14·2
Queensland	1921	9·3	Ireland	1921	14·2
New South Wales	1921	9·5	Switzerland	1920	14·4
Australia	1921	9·9	Germany	1922	15·1
South Australia	1921	10·0	Finland	1920	15·2
Tasmania	1921	10·3	Austria	1921	16·2
Canada[1]	**1922**	**10·4**	France	1920	16·5
Western Australia	1921	10·4	Italy	1916	20·1
Victoria	1921	10·5	Hungary	1922	20·8
Union of South Africa (whites)	1920	11·1	Serbia	1912	21·1
Ontario	1922	11·4	Spain	1921	21·3
Norway	1921	11·5	Bulgaria	1911	21·5
Netherlands	1920	11·9	Jamaica	1919	22·2
England and Wales	1921	12·1	Japan	1921	22·7
Sweden	1921	12·4	Rumania	1914	23·8
Prince Edward Island	1922	12·4	Portugal	1914-18	24·4
Nova Scotia	1922	12·5	Chile	1907-16	28·6
United Kingdom	1921	12·5	Russia, European	1909	28·9
Denmark	1920	12·9	Ceylon	1920	29·6
United States[1]	1920	13·1			

[1]Registration Area.

Infantile and Maternal Mortality.

In recent years a great part of the energy devoted by the medical profession and sanitarians to bring about a decline in the death rate has gone to reduce infant mortality, and in this field a large measure of success has been attained. In Canada both the Dominion, provincial and municipal health authorities have taken part in the struggle to reduce infantile mortality, and usually, in the absence of epidemics, each year is showing an improvement. Even in the three years for which the figures are available for the registration area, there is evident a considerable decline in infantile mortality. While in 1920 more than 10 p.c. of all children born died in the first year of life, in 1921 the proportion dropped to 8·8 p.c. or 14,893 deaths in a total of 168,979 births, and in 1922 the infantile death rate showed a further betterment, dropping to 8·6 p.c. or 14,069 deaths in a total of 162,552. Deaths of children under one year of age constituted 20·6 p.c. of all deaths in 1922, as compared with 21·9 p.c. in 1921, and 21·4 p.c. in 1920. Table 56 shows that in nearly every province the infant death rate per 1,000 living births is lower in 1922 than it was in the two preceding years.

56.—Infantile Mortality by Provinces, together with the rate per 1,000 Living Births, 1920, 1921 and 1922.

Provinces.	Infant Deaths.			Infant Death Rate per 1,000 Births.		
	1920.	1921.	1922.	1920.	1921.	1922.
Prince Edward Island	184	180	150	80·0	83·5	73·0
Nova Scotia	1,536	1,311	1,225	116·5	100·7	97·3
New Brunswick	1,454	1,299	1,188	134·9	113·3	103·7
Ontario	7,497	6,768	5,910	103·7	91·2	82·9
Manitoba	1,882	1,533	1,666	102·7	83·0	94·2
Saskatchewan	1,958	1,814	1,874	85·7	80·6	85·6
Alberta	1,545	1,391	1,430	93·5	84·0	90·0
British Columbia	638	602	626	60·8	56·5	64·6
Canada (registration area)	16,694	14,893	14,069	100·1	88·1	86·6
Quebec	14,134	11,387	-	163·7	128·3	-
Canada (exclusive of the territories)	**30,828**	**26,280**	-	**121·8**	**102·0**	-

NOTE.—The figures for 1922 are subject to revision.

Infant Mortality by Sex.—Table 57 shows that while male births in 1921 exceeded female births by 5,289, yet owing to the greater mortality among male infants, their net advantage at the end of the year was only 3,066. For the registration area, the ratio of deaths to 1,000 births was 98 for males, as against 77 for females, and 88·1 per 1,000 births both sexes.

57.—Number and Ratio of Infant Deaths in the Registration Area to Living Births, by Sex and Provinces, 1921.

Provinces.	Males.			Females.			Both Sexes.
	Living Births.	Deaths under 1 yr.		Living Births.	Deaths under 1 yr.		Deaths per 1,000 Births.
		Number.	Per 1,000 Births.		Number.	Per 1,000 Births.	
Prince Edward Island	1,073	95	88	1,083	85	80	83·5
Nova Scotia	6,695	738	110	6,326	573	90	100·7
New Brunswick	5,942	740	124	5,523	559	101	113·3
Ontario	38,307	3,918	102	35,845	2,845	79	91·2
Manitoba	9,455	868	92	9,023	665	74	83·0
Saskatchewan	11,620	1,048	90	10,873	766	70	80·6
Alberta	8,493	808	95	8,068	583	72	84·0
British Columbia	5,549	343	62	5,104	259	51	56·5
Totals	**87,134**	**8,558**	**98**	**81,845**	**6,335**	**77**	**88·1**

Infant Mortality by Cause.—More than 82 p.c. of the total infant mortality in 1921 was attributed to 12 diseases, being 83 p.c. for male children and 82 p.c. for female children. In 1922 the same 12 causes were responsible for more than 86 p.c. of the infant mortality. In Table 58 are given the statistics of infant mortality by causes for both years.

58.—Infantile Mortality by Sex in the Registration Area, by Principal Causes of Death, 1921 and 1922.

Cause of Death.	1921.			1922.		
	Male.	Female.	Total.	Male.	Female.	Total.
Premature birth	1,862	1,391	3,253	1,998	1,479	3,477
Diarrhoea and enteritis	1,348	969	2,317	1,203	931	2,134
Congenital debility	1,322	943	2,265	1,139	797	1,936
Pneumonia	918	676	1,594	889	661	1,550
Bronchitis	150	116	266	104	94	198
Congenital malformations	470	363	833	504	385	889
Convulsions	325	201	526	284	205	489
Whooping cough	194	212	406	143	138	281
Other infectious diseases	293	190	483	527	370	897
Syphilis	45	33	78	34	30	64
Meningitis	92	83	175	58	44	102
Hernia	64	41	105	50	27	77
Cause of death not stated	472	354	826	408	293	701
Other diseases	1,003	763	1,766	727	547	1,274
Total	**8,558**	**6,335**	**14,893**	**8,068**	**6,001**	**14,069**
Rate per 1,000 living births	98·2	77·7	88·1	–	–	86·6

NOTE.—The figures for 1922 are subject to revision.

Infant Mortality in Various Countries.—The rate of infant mortality to living births has been greatly reduced in civilized countries by the recent advances in medical science and in sanitation. The low record is held at the present time by New Zealand, where in 1921 the rate of infantile mortality was only 47·8 per 1,000 living births as compared with 68 in 1905. Queensland, with an infantile mortality rate of 54·2 in 1921, made a remarkable record for a sub-tropical country, while Norway and Sweden with rates of 62·3 and 64·4 respectively in the latest available years, were the lowest among European countries.

As showing the improvement in recent years, it may be stated that the rate of infantile mortality in England and Wales has been reduced from 128 per 1,000 living births in 1905 to 83 in 1921, while the rate in Germany has declined from 196 in 1904 to 134 in 1921. In the Netherlands, again, the rate has declined from

131 per 1,000 living births in 1905 to 72·8 in 1920. Statistics are given by leading countries in Table 59.

59.—Rate of Infant Mortality per 1,000 Living Births in Various Countries of the World in Recent Years.

Country.	Year.	Rate of infant mortality.	Country.	Year.	Rate of infant mortality.
New Zealand	1921	47·8	Scotland	1921	90·0
Queensland	1921	54·2	Alberta	1922	90·0
Norway	1919	62·3	Denmark	1920	90·7
New South Wales	1921	62·6	Manitoba	1922	94·2
Sweden	1917	64·4	Finland	1920	96·7
British Columbia	1922	64·6	Nova Scotia	1922	97·3
South Australia	1921	65·5	Belgium	1919	102·9
Australia	1921	65·7	New Brunswick	1922	103·7
Victoria	1921	72·6	Quebec	1921	128·3
Netherlands	1920	72·8	Germany	1921	134·0
Prince Edward Island	1922	73·0	Prussia	1922	134·0
Ireland	1921	76·0	Serbia	1911	146·0
France	1912	78·0	Spain	1921	147·4
Tasmania	1921	78·0	Italy	1921	147·5
Western Australia	1921	78·3	Bulgaria	1911	156·0
Union of South Africa (whites)	1919	82·0	Jamaica	1919	161·0
Ontario	1922	82·9	Japan	1921	168·5
England and Wales	1921	83·0	Ceylon	1920	182·0
United Kingdom	1921	83·0	Rumania	1914	187·0
Switzerland	1920	83·8	Hungary	1922	199·6
Saskatchewan	1922	85·6	Austria	1918	205·8
United States[1]	1920	85·8	Russia, European	1909	248·0
Canada[1]	**1922**	**86·6**	Chile	1914	286·0

[1] Registration Area.

Infant Mortality in Cities.—In former times cities were considered to be "the graveyards of population." The number of deaths, consequent upon the rapid spread of infectious diseases, was generally greater than the number of births and it was the prevailing opinion that cities would naturally come to an end if they were not being constantly reinforced by fresh young life from the prolific countryside. The unhealthiness of cities was especially destructive of infant life, and it is one of the greatest triumphs of our time that the city life is in our days, if not as healthy, yet not necessarily more dangerous to human life or especially to infant life, than life in the country as a whole.

To give particular examples, the rate of infantile mortality in London, England was in 1921, 80 per 1,000 living births as compared with a rate for England and Wales of 83 per 1,000. New York City experienced in 1921 an infant mortality of 71 per 1,000 as against a rate of 85·8 per 1,000 for the registration area of the United States. The department of the Seine (Paris) had in 1919 an infantile mortality of 113 per 1,000 living births as compared with 123 for the 77 departments of France for which the vital statistics were collected. In Germany again, the infant mortality for Berlin was, in 1921, 135 per 1,000 living births as compared with 134 for the whole country.

In Canada, our experience, except in the province of Quebec, has also up to the present been rather favourable to the cities. Montreal had in 1921 an infant mortality of 158 per 1,000 living births as compared with 128 for the province of Quebec. On the other hand, Toronto had in 1921 an infant mortality of 91 per 1,000 living births as against 91·2 for the province of Ontario. So too, Winnipeg experienced in 1921 an infantile mortality of 77 per 1,000 as compared with 83 for Manitoba, and Vancouver in 1921 an infantile mortality of 59 per 1,000 living births as compared with 56·5 in the same year in the province of British Columbia as a whole.

Statistics of the rate of infantile mortality are given for the leading cities of the world for the latest available years in Table 60.

60.—Rate of Infantile Mortality per 1,000 Living Births in Great Cities of the World in Recent Years.

City.	Year.	Rate of infantile mortality.	City.	Year.	Rate of infantile mortality.
Auckland	1920	48	Edinburgh	1921	96
Amsterdam	1921	54	Antwerp	1921	98
Christiania	1921	54	Liverpool	1921	105
Zurich	1916	55	Glasgow	1921	106
Rome	1915	56	Aberdeen	1921	108
Victoria	1921	56	Monte Video	1916	111
Vancouver	1921	59	Dresden	1921	115
Stockholm	1921	61	Belfast	1921	115
Brisbane	1921	62	Dublin	1921	123
Sydney, New South Wales	1921	62	Munich	1921	126
Copenhagen	1921	67	Genoa	1916	126
New York	1921	71	Berlin, Germany	1921	135
Geneva	1916	73	Halifax	1921	135
Wellington	1920	74	Leipzig	1921	136
Adelaide	1921	74	Ottawa	1921	139
Melbourne	1921	74	Cologne	1921	140
Hobart	1921	75	Chicago	1916	145
Winnipeg	1921	77	Vienna	1921	146
Hamilton	1921	78	St. John	1921	147
London, Eng	1921	80	Prague	1921	151
Perth, W. Australia	1921	81	Sherbrooke	1920	154
Birmingham	1921	82	Marseilles	1916	157
Regina	1921	82	Montreal	1921	158
Washington	1919	85	Quebec	1921	163
Edmonton	1921	89	Breslau	1921	170
Saskatoon	1921	91	Rio de Janeiro	1912	170
Toronto	1921	91	Madrid	1915	177
London, Ont	1921	92	Florence	1916	192
Buenos Aires	1916	94	Petrograd	1912	249
Manchester	1921	94	Madras	1921	281
Paris	1921	95	Bombay	1920	556
Hamburg	1921	95			

Maternal Mortality.—A subject of cognate interest with infantile mortality is that of maternal mortality. The maternal mortality in the eight provinces constituting the registration area of Canada is shown by age groups in Table **61,** and by causes in Table **62.**

61.—Maternal Mortality in the Registration Area, by Age Groups, 1921 and 1922.

Age groups.	P.E.I.	N.S.	N.B.	Ont.	Man.	Sask.	Alta.	B.C.	Total.
1921.									
15–19	1	2	4	22	3	7	4	–	43
20–24	–	13	7	51	14	22	18	12	137
25–29	2	10	9	93	15	19	34	7	189
30–39	3	22	20	174	39	68	46	29	401
40–49	1	9	7	47	10	12	9	3	98
Totals	**7**	**56**	**47**	**387**	**81**	**128**	**111**	**51**	**868**
Rate per 1,000 living births	3·2	4·3	4·1	5·2	4·4	5·7	6·7	4·8	5·1
1922.									
15–19	1	3	5	18	4	7	6	2	46
20–24	2	13	5	76	8	23	19	6	146
25–29	3	14	14	71	29	28	24	7	190
30–39	–	32	30	158	43	50	47	33	393
40–49	1	8	5	51	14	17	13	11	120
50 and over	–	–	–	1	1	–	–	–	2
Age not stated	–	–	–	1	–	–	–	–	1
Totals	**7**	**70**	**59**	**370**	**99**	**125**	**109**	**59**	**898**
Rate per 1,000 living births	3·4	5·6	5·1	5·2	5·6	5·7	6·9	6·1	5·5

NOTE.—The figures for 1922 are subject to revision.

62.—Maternal Mortality in the Registration Area, by Causes of Death, 1921 and 1922.

Cause of death.	P.E.I.	N.S.	N.B.	Ont.	Man.	Sask.	Alta.	B.C.	Total, registration area.
1921.									
Accidents of pregnancy—total	1	8	3	98	17	26	23	11	187
(a) Abortion	–	1	2	39	9	8	9	4	72
(b) Ectopic gestation	–	1	–	11	3	–	8	4	27
(c) Other accidents of pregnancy	1	6	1	48	5	18	6	3	88
Puerperal haemorrhage	1	8	13	47	7	17	9	5	107
Other accidents of childbirth—total	1	5	4	48	15	21	21	5	120
(a) Caesarean section	–	1	–	4	2	–	2	3	12
(b) Other surgical operations and instrumental delivery	–	1	–	4	–	–	–	–	5
(c) Others under this title	1	3	4	40	13	21	19	2	103
Puerperal sepsis	2	9	6	75	24	33	26	14	189
Phlegmasia alba dolens; puerperal embolism or sudden death in puerperium	–	2	3	14	3	4	3	3	32
Puerperal albuminuria and convulsions	2	23	15	81	14	21	18	9	183
Following childbirth (not otherwise defined)	–	1	3	24	1	6	11	4	50
Puerperal diseases of the breast	–	–	–	–	–	–	–	–	–
Totals	**7**	**56**	**47**	**387**	**81**	**128**	**111**	**51**	**868**
1922.									
Accidents of pregnancy—total	2	12	12	78	18	27	25	18	192
(a) Abortion	–	6	2	34	9	12	17	13	93
(b) Ectopic gestation	–	1	4	18	3	5	2	–	33
(c) Other accidents of pregnancy	2	5	6	26	6	10	6	5	66
Puerperal haemorrhage	–	5	6	55	14	21	12	6	119
Other accidents of childbirth—total	–	8	6	42	11	10	16	4	97
(a) Caesarean section	–	–	2	15	2	1	1	–	21
(b) Other surgical operations and instrumental delivery	–	1	–	3	–	1	2	–	7
(c) Others under this title	–	7	4	24	9	8	13	4	69
Puerperal sepsis	2	12	14	59	24	31	22	9	173
Phlegmasia alba dolens; puerperal embolism or sudden death in puerperium	–	2	2	22	4	4	8	4	46
Puerperal albuminuria and convulsions	2	21	11	85	19	23	23	13	197
Following childbirth (not otherwise defined)	1	10	8	29	8	9	3	5	73
Puerperal diseases of the breast	–	–	–	–	1	–	–	–	1
Totals	**7**	**70**	**59**	**370**	**99**	**125**	**109**	**59**	**898**

NOTE.—The figures for 1922 are subject to revision.

III.—IMMIGRATION.

Immigration has throughout Canadian history played a great part in reinforcing Canadian population, especially the English-speaking population. While the great majority of French-Canadians can trace their genealogy back to ancestors who left the Old World 200 or 250 years ago, or even longer, the great bulk of English-speaking Canadians are comparative newcomers both to Canada and to this continent, though a considerable number of the United Empire Loyalist families had been resident in the old colonies for generations before they moved north to establish English-speaking settlements in Canada. During the middle third of the nineteenth century there was a great English-speaking immigration which settled the province of Ontario and made it for the first time more populous than the sister province of Quebec, thus bringing about the agitation for representation by population. Thereafter immigration slackened until the dawn of the twentieth century brought another flood of settlers to the newly opened territories of the Great North West, resulting in an increase of population between the censuses of 1901 and 1911 greater than the combined increase of the three decades from 1871 to 1901.

1.—Statistics of Immigration.

Immigration during the second decade of the twentieth century promised at its commencement to be even greater than during the first. In its first three years no fewer than 1,141,547 persons are reported to have entered Canada for purposes of settlement. If this rate had been maintained, the population of Canada in 1921 would certainly have been in excess of ten millions instead of being less than nine millions. The war, which commenced on August 4, 1914, dried up the sources of our immigration in Great Britain and Continental Europe, where every able-bodied man was needed for the defence of his country. Immigrant arrivals from the United Kingdom in 1918 only numbered some 3,000 as compared with 150,000 in 1913; from Continental Europe immigrant arrivals numbered only about 3,000 in 1916 as compared with approximately 135,000 in 1914. Since the war, immigration, though increasing, has never approached that of the pre-war period, which is probably a fortunate circumstance, since the capital necessary to set in employment such great bodies of labourers as came to Canada in 1912 and 1913 could hardly have been secured.

Immigration to Canada, as to other new countries, is generally greatest in "boom" periods, when capital as well as labour is leaving the older countries for the newer in order to secure the more remunerative investments generally to be found in virgin territories where the natural resources are still unexploited. In periods of depression, however, the sending abroad of both capital and labour is diminished, both preferring at such times to endure the evils which they know at home rather than take the risks of a new departure at a distance. This proposition is aptly illustrated by the statistics of Table 63, which show that during the past 25 years, immigration was at its minimum in the year of deepest depression, 1897, that it steadily increased from that time forward until 1908, that a decline took place in the fiscal year ended March 31, 1909, on account of the short depression of 1908, that thereafter immigration steadily increased till 1913, while the fiscal year ended March 31, 1914, showed a decline due to the depression which occurred in the year preceding the war. In the fiscal years 1915 to 1919 political rather than economic conditions restricted immigration, but with the expansion of business at the end of the war our immigration was more than doubled, while the depression

which characterized 1921 and 1922 is reflected in the declining immigration of the fiscal years ended March 31, 1922 and 1923. The improvement in business conditions in 1923 has been reflected in an increase of immigration during the first half of the fiscal year ending March 31, 1924. During these six months 94,333 settlers entered Canada as compared with 46,331 in the same period of the preceding year—an increase of 104 p.c.

The number of immigrant arrivals in Canada from the United Kingdom, the United States and other countries is given by years from 1897 in Table 63.

63.—Number of Immigrant Arrivals in Canada from the United Kingdom, the United States and other countries, 1897-1923.

Fiscal Years.	Immigrant Arrivals from			Total.	Fiscal Years.	Immigrant Arrivals from			Total.
	United Kingdom.	United States.	Other Countries.			United Kingdom.	United States.	Other Countries.	
1897[1]	11,383	2,412	7,921	21,716	1911	123,013	121,451	66,620	311,084
1898[1]	11,173	9,119	11,608	31,900	1912	138,121	133,710	82,406	354,237
1899[1]	10,660	11,945	21,938	44,543	1913	150,542	139,009	112,881	402,432
1900[2]	5,141	8,543	10,211	23,895	1914	142,622	107,530	134,726	384,878
1901	11,810	17,987	19,352	49,149	1915	43,276	59,779	41,734	144,789
1902	17,259	26,388	23,732	67,379	1916	8,664	36,937	2,936	48,537
1903	41,792	49,473	37,099	128,364	1917	8,282	61,389	5,703	75,374
1904	50,374	45,171	34,786	130,331	1918	3,178	71,314	4,582	79,074
1905	65,359	43,543	37,364	146,266	1919	9,914	40,715	7,073	57,702
1906	86,796	57,796	44,472	189,064	1920	59,603	49,656	8,077	117,336
1907[3]	55,791	34,659	34,217	124,667	1921	74,262	48,059	26,156	148,477
1908	120,182	58,312	83,975	262,469	1922	39,020	29,345	21,634	89,999
1909	52,901	59,832	34,175	146,908	1923	34,508	22,007	16,372	72,887
1910	59,790	103,798	45,206	208,794					

[1] Calendar year. [2] Six months, January to June, inclusive. [3] Nine months ended March 31.

NOTE—See Table 7 of this section for an estimate of the movement of population between the censuses of 1911 and 1921.

Nationality of Immigrant Arrivals.—Immigration, which was at a low ebb during the war period, may once more become, when normal conditions are restored, the chief means of reinforcing population and populating the vast waste spaces of Canada. Under such conditions the racial and linguistic composition of that immigration becomes of paramount importance. Canadians generally prefer that settlers should be of a readily assimilable type, already identified by race or language with one or other of the two great races now inhabiting this country—and thus prepared for the assumption of the duties of democratic Canadian citizenship. Since the French are not to any great extent an emigrating people, this means that the preferable settlers are those who speak the English language—those coming from the United Kingdom or the United States. Next in order of readiness of assimilation are the Scandinavians and the Dutch, who readily learn English and are already acquainted with the working of free democratic institutions; a few years ago most Canadians would have included the Germans in the same category. Settlers from Southern and Eastern Europe, however desirable from the purely economic point of view, are less readily assimilated, and the Canadianizing of the people from these regions who came to Canada in the first fourteen years of this century is a problem both in the agricultural Prairie Provinces and in the cities of the East. Less assimilable still, according to the general opinion of Canadians, are those who come to Canada from the Orient.

On the whole the great bulk of Canadian immigration of the past generation has been drawn from the English-speaking countries, and from those continental European countries where the population is ethnically nearly related to the British. The nationalities of the immigrant arrivals of the 8 years from 1916 to 1923 are shown in Table **64.**

64.—Immigrant Arrivals in Canada, by Nationalities and Races, fiscal years 1916-1923.

Nationalities.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.
British Subjects—British Isles—								
English	5,857	5,174	2,477	7,954	45,173	47,687	23,225	19,188
Irish	818	958	174	336	2,751	6,384	3,572	3,668
Scottish	1,887	2,062	473	1,518	10,997	19,248	11,596	11,071
Welsh	102	88	54	106	682	943	627	581
Total, British Isles	8,664	8,282	3,178	9,914	59,603	74,262	39,020	34,508
Other British—								
Africans, South	11	1	4	–	23	63	32	41
Australians	32	18	34	35	88	90	76	67
Bermudians	–	16	10	1	1	8	2	7
East Indians	1	–	–	–	–	10	13	21
Jamaicans	9	6	24	2	3	18	13	30
Maltese	4	109	144	2	405	140	34	57
Newfoundlanders	255	1,243	1,199	512	443	1,042	367	1,552
New Zealanders	18	12	13	15	31	40	25	33
Total, Other British	330	1,405	1,428	567	994	1,411	562	1,808
Grand Total, British Subjects	**8,994**	**9,687**	**4,606**	**10,481**	**60,597**	**75,673**	**39,582**	**36,316**
European Continental Nationalities—								
Albanians	–	–	–	–	–	6	6	1
Austrians	15	–	–	–	5	26	14	23
Belgians	172	126	19	48	1,532	1,645	503	316
Bulgarians	1	–	–	–	1	4	27	19
Czecho-Slovaks	–	1	–	–	4	308	152	101
Dutch	186	151	94	59	154	595	183	119
Esthonians	–	–	–	–	–	–	–	12
Finnish	139	249	113	2	44	1,401	274	1,171
French	180	199	114	222	1,584	861	332	281
Germans	27	9	1	1	12	137	178	216
Greeks	145	258	45	4	39	357	209	177
Hebrews, n.e.s.	18	28	2	15	32	920	2,336	659
Hebrews, Austrian	1	–	–	–	–	1	1	1
Hebrews, German	–	–	–	–	–	–	–	1
Hebrews, Polish	–	–	–	–	36	1,600	5,216	1,379
Hebrews, Russian	46	108	30	7	48	242	851	753
Hungarians	–	–	–	–	–	23	48	23
Italians	388	758	189	49	1,165	3,880	2,413	2,074
Jugo-Slavs	6	2	–	1	12	89	180	136
Latvians	–	–	–	–	–	–	–	1
Lithuanians	–	–	–	–	–	–	19	106
Luxembergers	–	–	–	–	16	16	5	3
Polish	8	12	–	4	76	4,061	2,707	2,921
Portuguese	–	1	1	–	3	4	–	2
Rumanians	4	4	–	–	21	969	759	427
Russians	40	25	42	42	51	1,077	321	222
Scandinavians—								
Danes	167	145	74	44	233	511	541	382
Icelanders	15	9	3	12	11	50	31	21
Norwegian	232	303	235	91	179	429	480	507
Swedes	177	332	156	101	241	715	442	948
Spanish	11	76	28	12	15	202	6	15
Swiss	42	30	12	11	100	235	187	152
Turks	–	5	–	–	1	8	3	3
Ukranians	–	–	–	2	–	491	89	36
Total European Continental Nationalities	**2,020**	**2,831**	**1,158**	**727**	**5,615**	**20,863**	**18,513**	**13,208**

64.—Immigrant Arrivals in Canada, by Nationalities and Races, fiscal years 1916-1923—concluded.

Nationalities.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.
Non-European Nationalities or Races—								
Arabians	–	–	–	–	–	8	5	2
Argentinians	–	–	–	–	2	4	–	4
Armenians	–	3	2	–	10	85	70	59
Chinese	88	393	769	4,333	544	2,435	1,746	711
Cubans	1	3	1	–	2	–	–	–
Egyptians	–	–	–	–	–	9	2	–
Japanese	401	648	883	1,178	711	532	471	369
Mexicans	–	–	1	3	–	1	–	–
Negroes	34	98	35	22	61	144	42	42
Persians	3	–	2	2	–	1	9	1
Syrians	3	9	2	–	18	443	123	91
West Indians	38	293	273	220	62	110	24	44
Other Countries	3	–	–	–	3	–	–	1
Total Non-European Nationalities	**571**	**1,447**	**1,968**	**5,758**	**1,413**	**3,772**	**2,492**	**1,324**
From the United States[1]	**36,952**	**61,409**	**71,342**	**40,736**	**49,711**	**48,169**	**29,412**	**22,039**
Grand Total	**48,537**	**75,374**	**79,074**	**57,702**	**117,336**	**148,477**	**89,999**	**72,887**

[1] Includes United States citizens via ocean ports.

Destination of Immigrant Arrivals.—The destination of the immigrant arrivals in Canada are given for the period from 1901 to 1923 in Table 65, which may be compared with the census tables (Tables 1 to 4 of this section) showing the increase of population in the decades between 1901 and 1921. While immigration to the Maritime Provinces during the period was comparatively small that to Quebec was very considerable, and that to Ontario very large. The lion's share of the immigrant arrivals, however—over 1,520,000 persons—gave the Prairie Provinces as their destination, and 410,619 stated their destination as British Columbia or the Yukon.

65.—Destination of Immigrants into Canada, by Provinces, 1901-1923.

Fiscal Year.	Maritime Provinces.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia and Yukon Terr'y.	Not shown.	Totals.
1901	2,144	10,216	6,208	11,254	14,160		2,600	2,567	49,149
1902	2,312	8,817	9,798	17,422	22,199		3,483	3,348	67,379
1903	5,821	17,040	14,854	39,535	43,898		5,378	1,838	128,364
1904	5,448	20,222	21,266	34,911	40,397		6,994	1,093	130,331
1905	4,128	23,666	35,811	35,387	39,289		6,008	1,977	146,266
1906	6,381	25,212	52,746	35,648	28,728	26,177	12,406	1,766	189,064
1907 (9 mos.)	6,510	18,319	32,654	20,273	15,307	17,559	13,650	395	124,667
1908	10,360	44,157	75,133	39,789	30,590	31,477	30,768	195	262,469
1909	6,517	19,733	29,265	19,702	22,146	27,651	21,862	32	146,908
1910	10,644	28,524	46,129	21,049	29,218	42,509	30,721	–	208,794
1911	13,236	42,914	80,035	34,653	40,763	44,782	54,701	–	311,084
1912	15,973	50,602	100,227	43,477	46,158	45,957	51,843	–	354,237
1913	19,806	64,835	122,798	43,813	45,147	48,073	57,960	–	402,432
1914	16,730	80,368	123,792	41,640	40,999	43,741	37,608	–	384,878
1915	11,104	31,053	44,873	13,196	16,173	18,263	10,127	–	144,789
1916	5,981	8,274	14,743	3,487	6,001	7,215	2,836	–	48,537
1917	5,710	10,930	26,078	5,247	9,874	12,418	5,117	–	75,374
1918	5,247	9,059	23,754	6,252	12,382	16,821	5,559	–	79,074
1919	3,860	6,772	13,826	4,862	8,552	11,640	8,190	–	57,702
1920	5,554	13,078	39,344	11,387	14,287	20,000	13,686	–	117,336
1921	6,353	21,100	62,572	12,649	13,392	17,781	14,630	–	148,477
1922	3,222	13,724	34,590	8,904	9,894	11,825	7,840	–	89,999
1923	3,298	9,343	30,444	6,037	8,186	8,798	6,781	–	72,887
Total	**176,339**	**577,958**	**1,040,940**	**510,574**	**1,010,427**		**410,748**	**13,211**	**3,740,197**

Occupation of Immigrant Arrivals.—As stated below in the paragraphs dealing with immigration policy, the settlers most universally acceptable to Canadians are those who settle on the land or those females who enter domestic service. In Table 66 will be found statistics of the occupations of immigrant arrivals in Canada during the fiscal years ended March 31, 1922 and 1923.

66.—Occupation and Destination of Total Immigrant Arrivals in Canada for the Fiscal Years 1922 and 1923.

Description.	1922.			1923.		
	Via Ocean Ports.	From the United States.	Totals.	Via Ocean Ports.	From the United States.	Totals.
Farmers and farm labourers—						
Men	11,556	8,049	19,605	11,370	6,389	17,750
Women	3,600	2,384	5,984	2,536	2,070	4,606
Children	3,185	2,861	6,046	2,242	2,544	4,786
General labourers—						
Men	2,812	1,802	4,614	2,675	884	3,559
Women	844	445	1,289	388	229	617
Children	594	340	934	344	169	513
Mechanics—						
Men	3,623	2,285	5,908	4,158	1,382	5,540
Women	1,886	544	2,430	1,293	386	1,679
Children	919	453	1,372	836	351	1,187
Clerks, traders, etc.—						
Men	1,404	1,175	2,579	1,003	688	1,691
Women	1,049	489	1,538	651	315	966
Children	428	283	711	237	181	418
Miners—						
Men	494	146	640	920	175	1,095
Women	101	19	120	111	30	141
Children	109	22	131	142	25	167
Domestics—						
Women	6,880	755	7,635	6,273	701	6,974
Not classified—						
Men	3,256	1,995	5,251	2,264	1,387	3,651
Women	9,973	3,073	13,046	7,359	2,414	9,773
Children	7,941	2,225	10,166	6,078	1,696	7,774
Totals—						
Men	23,145	15,452	38,597	22,390	10,896	33,286
Women	24,333	7,709	32,042	18,611	6,145	24,756
Children	13,176	6,184	19,360	9,879	4,966	14,845
Totals	**60,654**	**29,345**	**89,999**	**50,880**	**22,007**	**72,887**
Destination—						
Maritime Provinces	2,033	1,189	3,222	2,368	930	3,298
Quebec	9,357	4,367	13,724	6,163	3,180	9,343
Ontario	25,741	8,849	34,590	24,417	6,027	30,444
Manitoba	7,188	1,716	8,904	4,589	1,457	6,037
Saskatchewan	5,365	4,529	9,894	4,413	3,773	8,186
Alberta	5,243	6,582	11,825	4,113	4,685	8,798
British Columbia	5,722	2,008	7,730	4,819	1,833	6,652
Yukon	5	105	110	7	122	129

Prohibited Immigration.—The following is a summary of the classes whose admission to Canada is prohibited under the existing regulations. The regulations, however, do not apply to Canadian citizens or persons having Canadian domicile:—

(1) Imbeciles, feebleminded persons, epileptics, insane persons, persons of constitutional psychopathic inferiority, persons suffering from chronic alcoholism and those mentally defective to such a degree as to affect their ability to earn a living.

(2) Persons afflicted with tuberculosis or with any loathesome, contagious or infectious disease or a disease which may be dangerous to public health; immigrants who are dumb, blind or otherwise physically defective.

(3) Prostitutes and women and girls coming to Canada for any immoral purpose, pimps, procurers and persons who have been convicted of any crime involving moral turpitude.

(4) Professional beggars or vagrants, charity aided immigrants and persons who are likely to become public charges.

(5) Anarchists, persons who disbelieve in or are opposed to organized government or who belong to any organization teaching disbelief in or opposition to organized government, persons who have been guilty of espionage or high treason and persons who have been deported from Canada.

(6) Persons over fifteen years of age unable to read. The literacy test, however, does not apply to a father or grandfather over fifty-five years of age, or to a wife, mother, grandmother or unmarried daughter or widowed daughter.

The Immigration Act provides for the rejection and deportation of immigrants belonging to the prohibited classes and also for the deportation of those who become undesirables within Canada within five years after legal entry.

The operation of the above regulations is illustrated in Table 67, which gives the numbers of immigrants rejected or deported after admission, the causes of such rejection or deportation, and the nationalities of those deported, for each of the ten fiscal years ended 1914 to 1923, together with the totals for the 21 fiscal years from 1903 to 1923.

67.—Rejections of Immigrants upon Arrival at Ocean Ports and Deportations after Admission, by Principal Causes and by Nationalities, 1903-1923.

Principal causes.	Number Rejected at Ocean Ports.											Total.
	1903-1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	
Accompanying patients..	434	76	58	4	8	1	–	9	13	39	13	655
Alien enemies	–	–	–	–	–	–	–	–	4	5	3	12
Bad character	754	102	56	17	4	11	2	1	9	2	20	978
Contract labour	87	–	–	–	–	–	4	1	–	–	–	92
Criminality	65	3	2	4	–	1	1	3	14	6	4	103
Head tax	6	–	–	–	–	–	–	–	–	–	–	6
Lack of funds	1,675	994	452	38	55	19	10	28	255	292	24	3,842
Likely to become a public charge	1,768	76	71	55	55	19	27	125	236	208	119	2,759
Medical causes	4,162	398	319	34	30	12	19	21	99	60	37	5,191
Not complying with regulations	295	178	40	11	22	8	7	474	291	278	318	1,922
Previously rejected	10	–	–	–	–	–	–	–	–	–	–	10
Unskilled labour, B.C.	–	–	–	–	–	–	–	–	32	193	94	319
Totals	**9,256**	**1,827**	**998**	**163**	**174**	**71**	**70**	**662**	**953**	**1,083**	**632**	**15,889**

Principal causes.	Number Deported after Admission.											
Accompanying patients..	145	10	34	5	9	39	10	18	37	48	52	407
Bad character	506	159	128	68	60	84	35	22	52	105	66	1,285
Criminality	1,083	376	404	329	277	274	236	334	586	630	543	5,072
Medical causes	2,296	570	379	206	98	39	70	123	133	313	282	4,509
Not complying with regulations	24	4	–	–	–	–	–	–	–	–	10	38
Public charges	2,853	715	789	635	161	91	103	158	236	950	679	7,370
Totals	**6,907**	**1,834**	**1,734**	**1,243**	**605**	**527**	**454**	**655**	**1,044**	**2,046**	**1,632**	**18,681**

67.—Rejections of Immigrants upon Arrival at Ocean Ports and Deportations after Admission, by Principal Causes and by Nationalities, 1903-1923—concluded.

Nationalities.	Number Deported after Admission.											
	1903-1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	Total.
British	4,358	952	877	602	186	36	99	184	295	1,107	888	9,584
American	1,066	405	461	437	324	407	279	292	616	725	520	5,632
Other countries	1,483	477	396	204	95	84	76	79	133	214	224	3,465
Totals	**6,907**	**1,834**	**1,734**	**1,243**	**605**	**527**	**454**	**655**	**1,044**	**2,046**	**1,632**	**18,681**

Juvenile Immigration.—Among the most generally acceptable immigrant arrivals are the juveniles of both sexes, who are trained by highly accredited British organizations for Canadian life before coming to Canada, the boys being taught the lighter branches of farm work, while the girls are instructed in domestic occupations. On arrival in Canada the boys are placed on farms, while the girls are placed either in town or country, but the organizations remain the legal guardians of the children until they have reached maturity, and in addition the children are subject to efficient and recurrent Government inspection until they reach their nineteenth year. This inspection is under the control of the Supervisor of Juvenile Immigration.

The number of juveniles immigrated to Canada in each year since 1901, together with the number of applications for their services, is given in Table **68**, from which it may be seen that the applications are in recent years from 10 to 15 times the number of young persons immigrated.

68.—Juvenile Immigrants and Applications for their Services, 1901-1923.

Fiscal Year.	Juvenile immigrants.	Applications for their services.	Fiscal Year.	Juvenile immigrants.	Applications for their services.
	No.	No.		No.	No.
1901	977	5,783	1913	2,642	33,493
1902	1,540	8,587	1914	2,318	32,417
1903	1,979	14,219	1915	1,899	30,854
1904	2,212	16,573	1916	821	31,725
1905	2,814	17,833	1917	251	28,990
1906	3,258	19,374	1918	–	17,916
1907[1]	1,455	15,800	1919	–	11,718
1908	2,375	17,239	1920	155	10,235
1909	2,424	15,417	1921	1,426	19,841
1910	2,422	18,477	1922	1,211	15,371
1911	2,524	21,768	1923	1,184	17,005
1912	2,689	31,040			
			Total	**38,576**	**451,675**

NOTE.—The above are included in the total number of immigrants recorded elsewhere.
[1] Nine months.

Oriental Immigration.—The immigration to Canada of labourers belonging to the Asiatic races, able because of their low standard of living to underbid the white man in selling their labour is fundamentally an economic rather than a racial problem, affecting most of all those portions of the country which are nearest to the East and the classes which feel their economic position threatened.

Chinese Immigration.—As a result of the influx of Chinese into Canada, legislation was passed in 1885 (48-49 Vict., c. 71) providing that thereafter Chinese of the labouring class should be required as a condition of their entry into Canada to pay a head tax of $50 each; on January 1, 1901 (62-64 Vict., c. 32), this amount was increased to $100 and on January 1, 1904 (3 Edw. VII, c. 8) to $500. This tax is paid by Chinese immigrants, with the exception of consular officers, merchants and clergymen and their families, tourists, men of science, students and teachers, a record showing the number of Chinese admitted who paid the tax, the number exempt from it, and the revenue realized being given by years from 1886 in Table 69. In recent years the number of Chinese immigrants entering Canada has been much reduced, owing to the operation of Orders in Council (renewed every six months from December 8, 1913, and replaced by an Order in Council of June 9, 1919) under which the landing in British Columbia of skilled and unskilled artisans and labourers is prohibited.

69.—Record of Chinese Immigration, 1886-1923.

Fiscal Year.	Paying tax.	Exempt from tax.	Percentage of total arrivals admitted exempt from tax.	Registration for leave.	Total Revenue.
	No.	No.	p.c.	No.	$
1886-91	4,590	222	4·61	7,041	239,664
1892	3,276	6	0·18	2,168	166,503
1893	2,244	14	0·62	1,277	113,491
1894	2,087	22	1·04	666	105,021
1895	1,440	22	1·50	473	72,475
1896	1,762	24	1·34	697	88,800
1897	2,447	24	0·97	768	123,119
1898	2,175	17	0·78	802	109,754
1899	4,385	17	0·39	859	220,310
1900	4,231	26	0·61	1,102	215,102
1901	2,518	26	1·02	1,204	178,704
1902	3,525	62	1·73	1,922	364,972
1903	5,245	84	1·58	2,044	526,744
1904	4,719	128	2·64	1,920	474,420
1905	8	69	89·61	2,089	6,080
1906	22	146	86·90	2,421	13,521
1907[1]	91	200	68·73	2,594	48,094
1908	1,482	752	33·67	3,535	746,535
1909	1,411	695	33·00	3,731	713,131
1910	1,614	688	29·89	4,002	813,003
1911	4,515	805	15·13	3,956	2,262,056
1912	6,083	498	7·57	4,322	3,049,722
1913	7,078	367	4·93	3,742	3,549,242
1914	5,274	238	4·32	3,450	2,644,593
1915	1,155	103	8·19	4,373	588,124
1916	20	69	77·53	4,064	19,389
1917	272	121	30·78	3,312	140,487
1918	650	119	15·47	2,907	336,757
1919	4,066	267	6·16	3,244	2,069,669
1920	363	181	33·27	5,529	538,479
1921	885	1,550	63·66	6,807	474,332
1922	1,459	287	16·44	7,532	743,032
1923	652	59	8·30	6,682	434,557
Totals	**81,744**	**7,908**	**8·82**	**101,226**	**22,189,882**

[1]Nine months.

The Chinese Immigration Act of 1923 (13-14 Geo. V, c. 38) restricts the entry to or landing in Canada of persons of Chinese origin or descent, irrespective of allegiance or citizenship, other than government representatives, Chinese children born in Canada, merchants (defined by what regulations the Minister of Immigra-

tion and Colonization may prescribe) and students—the last two classes to possess passports issued by the Government of China and endorsed by a Canadian immigration officer.

Japanese immigration to Canada was comparatively negligible prior to the Russo-Japanese war of 1904-5, but thereafter assumed considerable proportions, no fewer than 7,601 Japanese immigrants entering Canada, largely from Hawaii, in the fiscal year ended March 31, 1908, and settling mainly in British Columbia. In that year an agreement was made with the Japanese Government under which the latter undertook to limit the number of passports issued to Japanese emigrating to Canada, while the Canadian Government agreed to admit those possessing such passports, while prohibiting others from entering. The statistics of Table **70** show that in this way Japanese immigration has been effectively limited.

East Indian immigration to Canada, like Japanese, is shown by the statistics of Table **70** to have been negligible down to 1907, when no fewer than 2,124 East Indian immigrants arrived. However, as a consequence of the operation of section 38 of the Immigration Act of 1910, East Indian immigration has since that date been comparatively small. A resolution of the Imperial War Conference of 1918 declared that "it is the inherent function of the Governments of the several communities of the British Commonwealth that each should enjoy complete control of the composition of its own population by means of restriction on immigration from any of the other communities." However, it was recommended that East Indians already permanently domiciled in other British colonies should be allowed to bring in their wives and minor children, a recommendation which was implemented, so far as Canada was concerned, by Order in Council of March 26, 1919. However, in the fiscal years ended March 31, 1921, 1922 and 1923, only 10, 13, and 21 East Indian immigrants respectively were admitted.

70.—Record of Oriental Immigration, 1901-1923.

Fiscal Year.	Chinese.	Japanese.	East Indians.	Total.	Fiscal Year.	Chinese.	Japanese.	East Indians.	Total.
	No.	No.	No.	No.		No.	No.	No.	No.
1901	2,544	6	–	2,550	1913	7,445	724	5	8,174
1902	3,587	–	–	3,587	1914	5,512	856	88	6,456
1903	5,329	–	–	5,329	1915	1,258	592	–	1,850
1904	4,847	–	–	4,847	1916	89	401	1	491
1905	77	354	45	476	1917	393	648	–	1,041
1906	168	1,922	387	2,477	1918	769	883	–	1,652
1907[1]	291	2,042	2,124	4,457	1919	4,333	1,178	–	5,511
1908	2,234	7,601	2,623	12,458	1920	544	711	–	1,255
1909	2,106	495	6	2,607	1921	2,435	532	10	2,977
1910	2,302	271	10	2,583	1922	1,746	471	13	2,230
1911	5,320	437	5	5,762	1923	711	369	21	1,101
1912	6,581	765	3	7,349					
					Total	**60,621**	**21,258**	**5,341**	**87,220**

[1] Nine months.

Expenditure on Immigration.—The sums expended by the Dominion Government on immigration in each of the fiscal years ended 1868 to 1923 inclusive, as stated in the Public Accounts issued annually by the Department of Finance, are shown in Table **71.**

71.—Expenditure on Immigration in the Fiscal Years 1868-1923.

(Compiled from the Public Accounts).

Year.	$	Year.	$	Year.	$	Year.	$
1868	36,050	1883	373,958	1898	261,195	1912	1,365,000
1869	26,952	1884	511,209	1899	255,879	1913	1,427,112
1870	55,966	1885	423,861	1900	434,563	1914	1,893,298
1871	54,004	1886	257,355	1901	444,730	1915	1,658,182
1872	109,954	1887	341,236	1902	494,842	1916	1,307,480
1873	265,718	1888	244,789	1903	642,914	1917	1,181,991
1874	291,297	1889	202,499	1904	744,788	1918	1,211,954
1875	278,777	1890	110,092	1905	972,357	1919	1,112,079
1876	338,179	1891	181,045	1906	842,668	1920	1,388,185
1877	309,353	1892	177,605	1907[1]	611,201	1921	1,688,961
1878	154,351	1893	180,677	1908	1,074,697	1922	2,052,371
1879	186,403	1894	202,235	1909	979,326	1923	1,987,745
1880	161,213	1895	195,653	1910	960,676		
1881	214,251	1896	120,199	1911	1,079,130	**Total**	**31,420,982**
1882	215,339	1897	127,438				

[1] Nine months.

2.—Immigration Policy.

At the close of the war there was a general anticipation that the movement of immigration to Canada would again become very heavy, but for several reasons this anticipation was not realized. Canada, in common with all other countries, experienced a share of the dislocation of business and the industrial uncertainties of the reconstruction period. The demobilization of the Canadian forces, coincident with the suspension of all war activities, created a surplus of labour which made it impracticable for the Canadian Department of Immigration and Colonization to extend inducements to immigration. The welfare of the country seemed to demand that, as a rule, only those should be admitted who would assist in developing its natural resources, chief among which is its fertile agricultural land. Farmers and farm labourers became more than ever the objective of the Department. Other factors contributing to a lower immigration as compared with the period immediately preceding the war were the high cost of ocean and land transportation and the balance of exchange against British and European settlers, coupled with the generally impoverished condition of some of the countries which had formerly contributed immigrants, and the fact that, although great areas of land were still available in Canada as free homesteads, they were now located for the most part at considerable distances from railways. The recent policy of the Department has been not to encourage settlement in localities likely to require additional railway construction at an early date. Most of the restrictive regulations have now been cancelled, but they created in the minds of many people outside of Canada some doubt as to their welcome in the Dominion.

During 1923, on account of the return of prosperity and the absorption of surplus labour, it became increasingly evident that popular opinion in Canada favoured a resumption of immigration activities on a considerable scale. The Government announced its intention of encouraging the migration of the largest possible number of those classes of settlers which Canada can absorb. This policy was embodied in a statement made by the Hon. J. A. Robb shortly after his appointment as Minister of Immigration and Colonization, and elicited favourable comment in the British press, which welcomed a resumption of Canadian immigration activities. While, as the Minister pointed out, there are would-be immigrants into Canada who are not suited for the Dominion owing to physical, moral or industrial unfitness or because they belong to races that cannot be assimilated without social or economic loss to Canada, there are in Great Britain and Continental Europe tens of thousands of skilled workers and unskilled workers (not agriculturists) who would be an asset to Canada if steady employment could be found for them.

The present immigration policy of the Canadian Government recognizes that while Canada requires increased population, quality rather than quantity must count; that British immigration must hold first place in the programme, and that the selection of Canada's new settlers must have due regard to their physical, industrial, and financial fitness, and the Dominion's power of absorption.

The greatest need is for those able and willing to settle on the land and assist in agricultural development. While capital is essential to immediate land settlement, its absence will not close the road to prosperity to those strong of hand and stout of heart, determined to succeed. The open door policy prevails for those classes likely to succeed and for whom there is a demand. In the interests of the immigrant and of Canada, determination of fitness, as far as possible, takes place before the immigrant leaves his own country. Final approval is not given until the immigrant arrives in Canada, but those who consult the Canadian Government agents overseas are able to learn the conditions of admission, and many journeys which would have ended in rejection are thus prevented. As the British Isles alone cannot furnish a sufficient quota of the agricultural classes, efforts are being made to encourage immigration from certain areas of the continent of Europe and from the United States.

Steps have been taken to ensure efficient co-operation with the British Government under the terms of the Empire Settlement Act as they apply to affording assistance to those of the agricultural and house-worker classes from the Mother country. To promote the better functioning of colonization activities in Canada, the machinery of the Soldier Settlement Board has been co-ordinated with that of the Department of Immigration and Colonization. This action has placed at the command of the Department a large and well organized staff, with representatives throughout the Dominion thoroughly conversant with local conditions and able to advise and direct the newcomer to his best advantage.

VII.—PRODUCTION.

This section includes a general survey of production, followed by statistics of agriculture, the fur trade, forestry, fisheries, minerals, water powers, manufactures and construction.

The term "production" is used in this connection in its popular acceptation, *i.e.*, as including such processes as the growing of crops, extraction of minerals, capture of fish, conversion of water power into electrical current, manufacturing, etc.,—in economic phrase, the creation of "form utilities." It does not include various activities which are no less "productive" in a broad and strictly economic sense, such as (*a*) transportation, refrigeration, merchandising, etc., which add to commodities already worked up into form the further utilities of "place", "time" and "possession", and (*b*) personal and professional services, such as those of the teacher and doctor, which are not concerned with commodities at all, but are nevertheless useful to a civilized society—representing, in economic language, the creation of "service utilities".

As showing the importance of these latter activities, it may be pointed out, for comparison with the figures in the accompanying tables, that railway gross earnings in 1920 amounted to $492,101,104, street railway gross earnings to $47,047,246, and telephone and telegraph earnings to $44,811,140, all of which from a broad point of view may be considered as "production". It may be further noted that of 2,723,634 persons ten years of age and over employed in 1911 in gainful occupations in Canada, 217,544 were engaged in transportation, 283,087 in trade and merchandising, 411,232 in domestic, personal and professional service, and civil and municipal government,—a total of 911,863 or one-third of the whole. In other words, only about two-thirds of usefully and gainfully employed persons are engaged in "production" according to the definition adopted in the present statement. We might therefore add one half to the present total as a rough estimate of the value in dollars of the total productive activity of the Canadian people according to the economist's definition of production, which approximates to the concept of national income.

I.—GENERAL SURVEY OF PRODUCTION.

There is frequent demand in Canada for a survey of production that will differentiate the more important branches and at the same time give a purview of the whole that is free from overlapping. This is somewhat difficult to accomplish with clearness, in view of the varying definitions that attach to industrial groups from different points of view. For example, brick, tile and cement are frequently included in "mineral production" as being the first finished products of commercial value resulting from the production process; frequently, however, they are regarded as "manufactures" in view of the nature of the production process,—both allocations being correct according to the point of view.

The accompanying tables show the total value of all commodities produced in Canada during 1920 and 1921, the values being as in the producers' hands.

"Gross" and "Net" Production.—The values of products are shown under two headings, namely, "gross" and "net". "Gross" production shows the total value of all the individual commodities produced under a particular heading. "Net" production represents an attempt to eliminate the value of materials consumed in the production process. For purposes of ordinary economic discussion the net

figures should be used in preference to the gross, in view of the large amount of duplication which the latter includes because of the necessity of making the individual items self-contained.

Interpretation of Items.—The primary industries of agriculture, fishing, forestry, mining, etc., are separated in this statement from the secondary or manufacturing process. The close association between the two at points and the overlappings that are apt to occur have already been pointed out. As further explaining the procedure that has been followed in drawing up the tables, the following notes are appended:—

Agriculture.—Dairy factories are included under this heading; farm dairy products (gross) include the milk consumed whole and sold to dairy factories, and butter, etc., made on the farm.

Forestry.—Forestry production is understood to consist of the operations in the woods as well as those of saw mills and pulp mills, the latter being limited to the making of first products such as lumber, lath, shingles, pulp and cooperage stock.

Fur Production.—The item of fur production is limited to wild life production. To obtain a total of the peltries produced in Canada it would be necessary to add the wild life output to the production of pelts on fur farms.

Mineral Production.—Under mineral production all items are included that might be allocated to "manufactures". Considerable overlapping exists as between "mineral production" on the one hand and "manufactures" on the other. The Bureau presents the detailed statistics of these groups (the chief of which are smelters, brick, cement, lime, etc.) in its reports on mineral production, since their product is the first to which a commercial value is ordinarily assigned.

Total Manufactures.—The figure given for the heading is a comprehensive one, including the several items listed with the extractive industries above, though also frequently regarded as "manufactures", viz., dairy factories, fish canning and curing, saw mills, pulp mills, shipbuilding and certain mineral industries. This duplication is eliminated from the grand total as well as from "manufactures, *n.e.s.*" listed in Table 3.

For the purpose in hand, a change was made in the total value of manufactured products, *viz.*, $2,747,926,675 in 1921, as shown in the subsection on manufactures. The totals for construction, hand trades and repair, exclusive of shipbuilding, amounting to $191,436,045, and for the central electric stations, amounting to $73,636,094, were deducted, and the value of the products of certain mineral industries amounting to $53,213,256 was added.

Manufactures, n.e.s.—The figures given for manufactures, *n.e.s.*, are exclusive of the value of the products of all manufacturing processes closely associated with the extractive industries that are frequently included under this heading; hence it is obvious that the grand total is equivalent to an amount obtained by adding the values for manufactures, *n.e.s.*, and for the other eight divisions.

Analysis of Tables.—On reference to Table 1, it will be observed that in 1920 manufactures outstripped agriculture as the chief wealth-producing industry, the net output of manufactures in 1920 being nearly $1,559,000,000 as contrasted with a total of $1,520,000,000 for agriculture. When the cost of materials is added to the net output, the lead of manufacturing is obviously much greater. Confining the analysis to net production, forestry contributed 11 p.c. of the total

output of $3,682,000,000 as compared with 41 p.c. for agriculture. Mineral production followed with a value of about 5·8 p.c. of the net output (Table 3). Construction is credited with a net production of $136,000,000 or 3·7 p.c. Other industries, each credited with less than 2 p.c. of the national production, were the generation of electric power, custom and repair work, fisheries and trapping, which contributed to the value of production during 1920 in the order named.

Manufactures, construction and repair shops such as garages, blacksmithing and steam laundries are regarded as secondary production, which may be contrasted with the extractive or primary industries. Deducting the net value of the products made by manufacturing establishments closely associated with the primary industries, a value of about $1,957,000,000 remained in 1920 as the product of the strictly extractive processes. This compares with $1,404,000,000, the net value of secondary production after all duplication has been eliminated. In other words, the combined extractive industries exceeded in net output the secondary industries by $553,000,000 in 1920.

With reference to the provincial statistics given in Tables 2 and 3, the analysis relates to the net production in 1920. The pre-eminence of Ontario as the most productive province is distinctly shown in Table 2. It produced in 1920 about 38 p.c. of the Canadian total of $3,682,000,000. Quebec held second place with 26·2 p.c., and the three western provinces of Saskatchewan, Alberta and British Columbia followed with percentages of 7·8, 7·2 and 6·2 respectively. The well known agricultural resources of Manitoba enabled the province to contribute 5·7 p.c. of the net output for 1920.

A series of percentages designed to show the relative importance to each province of the several productive industries in 1920 is given in Table 3. To facilitate comparison the percentages of the net output of manufactures to the net production of all industries have also been computed.

Nova Scotia was dependent almost equally on agriculture and manufacturing. The contribution of agriculture was 32·9 p.c. as compared with a percentage of 23·3 for manufactures, *n.e.s.* The percentage for the whole of the manufactured product was 31·9. The mining industry was also important with a production of 18·4 p.c. Agriculture, including fur-farming, contributed 81 p.c. of the net output of Prince Edward Island. Farming was the chief industry of New Brunswick and lumbering was a close second, the respective contributions being 40·6 and 35·4 p.c. The whole of manufactures was represented by a percentage of 31·4, while manufactures, n.e.s. was valued at 13·3 p.c.

The income derived from manufacturing in Quebec was greater than that from any other industry. The portion, aside from the output of establishments associated with the extractive industries, was equivalent to 37·6 p.c., while the net output of the entire manufacturing process, referred to the same base, was 48·1 p.c. Farming held second place with a production of 36·9 p.c. and forestry with an output of 14·4 p.c. occupied third rank in this connection. A similar order obtained in the province of Ontario, the pre-eminence of manufacturing being more marked than in the sister province of Quebec. The percentages for agriculture and forestry were 30·7 and 8·1 respectively. Mining was credited with an output of 4·8 p.c. and construction followed with a production of 3·7 p.c. Nearly 87 p.c. of the output of Saskatchewan was derived from farming, and the records of Manitoba and Alberta were 60 p.c. and 72·5 p.c. respectively. Manufacturing held second place in Manitoba and mining in Alberta, the mineral production of Alberta, consisting chiefly of coal mining, formed 12·7 p.c. of the net output of the province.

Lumbering constituted the chief industry of British Columbia, although manufacturing, agriculture and mining were also of importance, indicating the variety of the resources of the western province. Nearly 38 p.c. was contributed by the lumber industry, while farming and mining contended for third place with percentages of 17·8 and 17·2 respectively. The chief industry of the Yukon Territory was mining, with an output of 48·5 p.c. of the total production of the Territory.

1.—Summary by Industries of the Value of Production in Canada during 1920 and 1921.

Division of Industry.	1920.		1921.	
	Gross.	Net.	Gross.	Net.
	$	$	$	$
Agriculture	2,099,209,494	1,519,842,776	1,485,109,796	1,092,422,570
Forestry	545,763,505	408,831,482	343,122,670	258,325,785
Fisheries	63,588,428	49,241,339	43,456,342	34,931,935
Trapping	20,999,300	20,999,300	9,527,029	9,527,029
Mining	227,859,665	213,041,895	171,923,342	162,926,580
Electric power	65,705,060	65,705,060	73,376,580	73,376,580
Total primary production	3,023,125,452	2,277,661,352	2,126,515,759	1,631,510,621
Construction	206,168,135	135,871,044	121,836,367	76,396,407
Custom and repair	102,266,442	63,962,896	89,108,737	57,956,112
Manufactures[1]	3,675,989,988	1,588,544,194	2,536,067,792	1,151,970,226
Total secondary production[1]	3,984,424,565	1,758,381,134	2,747,012,896	1,286,322,745
Grand total	**6,352,856,119**	**3,681,948,905**	**4,485,487,785**	**2,728,906,285**

[1] The item "manufactures" includes dairy factories, saw mills, pulp mills, fish canning and curing, shipbuilding and certain mineral industries, which are also included in other headings above. This duplication amounting to a gross of $654,693,898 and a net of $354,093,581 for 1920 and a gross of $388,040,870 and a net of $188,927,081 for 1921 is eliminated from the grand total.

2.—Summary by Provinces of the Value of Production in Canada, 1920.

Province.	1920.		Percentages of Total Net Value.
	Gross Value.	Net Value.	
	$	$	
Prince Edward Island	33,648,064	24,399,552	0·7
Nova Scotia	285,079,452	185,292,183	5·0
New Brunswick	185,862,194	115,305,489	3·1
Quebec	1,637,681,148	962,419,765	26·2
Ontario	2,723,133,265	1,399,556,657	38·0
Manitoba	347,461,153	210,599,661	5·7
Saskatchewan	384,684,146	287,312,910	7·8
Alberta	376,420,786	264,571,430	7·2
British Columbia	375,560,788	229,138,933	6·2
Yukon	3,325,123	3,252,325	0·1
Grand Total	**6,352,856,119**	**3,681,948,905**	**100·0**

3.—Percentages of the Value of the Net Production in each Industry to the Total Net Output of each Province, 1920.

Industry.	Prince Edward Island.	Nova Scotia.	New Brunswick.	Quebec.	Ontario.
Agriculture	81·0	32·9	40·6	36·9	30·7
Forestry	4·2	8·7	35·4	14·4	8·1
Fisheries	7·0	6·9	3·8	0·3	0·2
Trapping	1·5	0·1	0·2	0·5	0·4
Mining	.....	18·4	2·2	3·0	4·8
Electric power	0·4	1·0	1·0	1·9	2·2
Construction	0·4	7·2	2·2	4·1	3·7
Repair work	0·7	1·5	1·3	1·3	1·9
Manufactures, n.e.s.	4·8	23·3	13·3	37·6	48·0
Grand Total	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**
Total manufactures (percentage to grand total of net production)	9·3	31·9	31·4	48·1	57·6

Industry.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.	Yukon.	Canada.
Agriculture	60·0	86·8	72·5	17·8	–	41·3
Forestry	2·0	1·6	1·2	37·9	–	11·1
Fisheries	0·6	0·1	0·2	9·8	1·0	1·3
Trapping	1·5	0·8	0·6	0·3	(1)44·1	0·6
Mining	2·0	0·7	12·7	17·2	48·5	5·8
Electric power	1·3	0·7	1·0	3·0	3·0	1·8
Construction	3·5	1·1	1·0	6·8	2·3	3·7
Repair work	2·4	1·6	1·5	2·7	1·1	1·7
Manufactures, n.e.s.	26·7	6·6	9·3	4·5	–	32·7
Grand Total	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**
Total manufactures (percentage to grand total of net production)	29·6	7·8	11·5	33·3	2·3	42·3

(1) Includes the trapping industry of the Northwest Territories.

II.—AGRICULTURE.

Agriculture, in the wider acceptation of the term as including stock raising and horticulture, is the chief industry of the Canadian people, employing in 1911, 34·3 p.c. of the total gainfully occupied population. In addition it provides the raw material for many Canadian manufactures and its products constitute a very large percentage of Canadian exports. It is therefore treated here in considerable detail.

The section commences with an account of the "Development of Agriculture in Canada." Thereafter is found a statement of current Governmental activities in connection with the promotion of agriculture, including those of the Dominion and Provincial Experiment Stations. Then come the statistics of agriculture, including field crops, farm live stock and poultry, fur farming, dairying, fruit, farm values, farm labour and wages, prices and miscellaneous, and since Canadian exports of agricultural commodities are sold in the world market, the section closes with a sub-section on the world's statistics of agriculture, compiled from the publications of the International Institute of Agriculture.

1.—Development of Agriculture in Canada.[1]

The Beginnings of Agriculture.

In the whole area now constituting Canada, the first settlement, and at the same time the first effort at agricultural production made by white men, was most

[1] Abridgement and revision of the article by Dr. Grisdale, published in the Year Book for 1921, p. 202.

probably that begun at Port Royal, now Annapolis, Nova Scotia, by the French under de Monts in 1605. Here some of the settlers cultivated patches of land and grew maize, pumpkins and beans, while cows were brought here by Poutrincourt in 1606. The Indians also grew maize to a small extent to supplement food obtained by hunting. According to the census of 1671, the Acadians, then numbering 441, had 429 arpents under cultivation, together with 866 cattle, 407 sheep and 36 goats. Thereafter the settlers continued to clear the lands and reclaim the fertile marshes from the sea, chiefly along the Basin of Minas, on which hay grew abundantly.

In the valley of the St. Lawrence, farming on a small scale appears to have been carried on by Champlain, the founder of Quebec, as early as 1608, when cattle were imported and hay and fodder grown, together with wheat and other grains. In 1626, Champlain established a farm at Cap Tourmente for cattle which he sent from Quebec.

The first real farmer, however, was Louis Hébert, who landed in Quebec in 1617 and immediately began to clear and cultivate the soil on what is now part of Upper Town, Quebec. His only tool was a spade, but he worked away till the soil was ready to receive the seed and also planted some apple trees. Hébert was followed by other farmers, among them Guillaume Couillard, Abraham Martin and Robert Giffard, the latter of whom was said to have had in 1635 large crops of wheat, peas and Indian corn. In the district of Three Rivers, Pierre Boucher had large crops of grains and vegetables, and in 1648, Pierre Gadbois and others commenced farming on land where now stands the city of Montreal.

The land was held under seigneurial or feudal tenure, similar to that prevailing in old France, a system which seems to have promoted the development of agriculture. Many former hunters and traders settled down as cultivators of the soil, and came to be known as "habitants."

In 1667 there were 11,448 arpents of land under cultivation, while the farmers owned 3,107 cattle and 85 sheep. More live stock of all kinds was gradually brought into the country. A census of 1721 gives the following statistics: arpents under cultivation, 62,145; in pasture, 12,203; grain harvested—wheat, 282,700 bushels; barley, 4,585 bushels; oats, 64,035 bushels; peas, 57,400 bushels; corn, 7,205 bushels; flax, 54,650 lb.; hemp, 2,100 lb.; tobacco, 48,038 lb. There were at this time 5,603 horses, 23,288 cattle, 13,823 sheep and 16,250 swine in the colony.

The period following the English conquest of Quebec, 1760 to 1850, was a critical one for agriculture, the governing classes being too much engrossed in politics to pay much attention to it. However, the settlement of the Eastern Townships was begun in 1774 by the United Empire Loyalists, who brought their cattle with them. These settlers were granted lands which were held under the tenure known as "free and common soccage." These settlements made good progress and were reinforced later on by French-Canadians from the seigneuries.

Agriculture in the Provinces before Confederation.

Prince Edward Island.—The first record of settlement in Prince Edward Island or St. John Island, as it was then called, was in 1713, when some families of Acadians migrated to its shores, bringing a few cattle with them. In 1763 the island was ceded to Great Britain, divided, and granted to persons who had claims on the ground of military service, but practically no attempt was made to cultivate the land. However, farming received a slight impetus on the arrival in 1783 of the United Empire Loyalists, who brought their cattle with them and began to cultivate the land. The country was undulating and the soil was found to be a bright red loam,

very suitable for the growing of cereal crops and potatoes. Rich deposits of mussel mud were found, which were used as fertilizer with good results. Soon Prince Edward Island oats and potatoes were listed on the markets of the Maritime Provinces.

Nova Scotia.—While the territory which is now Nova Scotia became a British possession by the Treaty of Utrecht in 1713, the first English-speaking settlement was made in Halifax in 1749, and for military rather than economic purposes. However, between 1751 and 1753 about 1,615 German and Swiss immigrants had settled in what is now the county of Lunenburg. Further, after the expulsion of the Acadians from Port Royal in 1755, a considerable number of New Englanders had settled in the Annapolis Valley. As early as 1762, 14,340 acres were under cultivation producing hay, grain and potatoes and supporting some live stock. In 1783, after the Peace of Paris, many United Empire Loyalists came to Nova Scotia, bringing their live stock with them. They received from the British Government grants of land, agricultural implements and seed corn.

In the Atlantic Provinces generally, the farmers were unprogressive and farming was at a rather low ebb when, in 1818, a series of letters published in the Acadian Recorder under the signature of "Agricola," attracted public attention. These letters dealt with all phases of the industry. The people were awakened from their lethargy and the outcome was the formation at the end of 1818 of the Central Agricultural Society of which "Agricola," now found to be John Young, a Scotsman who had come to Nova Scotia a few years previously, became secretary. Twenty-five other agricultural societies were organized within the next two years. Yearly exhibitions were held, improved stock and seed were distributed and conditions improved generally.

New Brunswick—As early as 1605 French adventurers, ascending the St. John river, noticed fields of Indian corn on the flats along its shores; but the first settlement was made by some fifty Acadians with a few cattle near that river in 1693. When Acadia was ceded to Great Britain in 1713, others moved north from the peninsula of Nova Scotia into New Brunswick, settled in the valleys and devoted themselves to growing corn and hay. The land was very fertile and produced abundant crops. About 1762 a number of Massachusetts colonists formed a settlement at a place now called Maugerville; others took the alluvial lands between there and the Jemseg river. In 1784, when a large part of the land belonging to the Acadians was seized by the British and given to the United Empire Loyalists, the Acadians moved to the northern part of the Province and founded the flourishing settlement of Madawaska. The rich soil along the St. John river, when only cleared of the trees and harrowed, produced 20 bushels of corn and 20 bushels of wheat per acre and when properly worked gave much better yields. In 1788 seventy acres of land were sold for £42 3s. 6d., but in the early years of the nineteenth century, land rose rapidly in value. Large quantities of hay, roots and vegetables of all kinds, as well as beef and mutton, were marketed at St. John.

Quebec.—During two centuries and a half the habitant varied his system of farming very little. When the land was cleared of trees, wheat and oats were sown among the stumps. Two crops of this nature were harvested and then hay and other grasses were grown for several years. When the stumps were sufficiently rotten, the land was ploughed. Half the land was ploughed in three consecutive years and seeded to cereals and roots; the other half was kept for the production of hay as pasture for live stock. This was alternated during the next three years, and so on. The quantity of live stock kept was small compared with the

area of the farm. This was not a very scientific system, but the soil was so rich that the crops of grain, roots and hay were always plentiful, so much so that flour, wheat and peas were being exported in 1749. Butter and cheese were always made, while maple sugar has been one of the regular products since 1690, and potatoes were first grown in 1758.

Ontario.—Agriculture in Ontario may be said to have begun in 1671, when Frontenac founded the first settlement near Kingston. He was granted a vast territory on the understanding that he would foster agriculture and stock raising; but little agricultural work was actually done, as all of the settlers' time was taken up in warring with the Indians. In 1701, a small settlement on the Detroit river was started by La Motte Cadillac, who is said to have brought some cows with him.

The first English-speaking agricultural settlement was not commenced until 1783, when the United Empire Loyalists arrived from the United States. They settled principally around Niagara, York, now Toronto, and the bay of Quinte, the settlements along the bay of Quinte and the St. Lawrence river being among the most populous. Townships were surveyed and grants of land given. As these exiled settlers were very poor owing to the confiscation of their property, they had to be provided with rations, clothes, implements, seed grain, etc. A cow was allotted to every two families and other articles were divided among them. The implements supplied them were very crude, but by combining their efforts they were able to clear open spaces in the forests, build rude huts and sow the seed among the stumps. The crops of wheat, corn, etc., grown on this virgin soil gave excellent yields for the first three years, but the crop of 1788 was a failure. During these years, flour mills were built at Cataraqui river, Napanee, Matilda, Niagara Falls, fort Erie and Grand river. The pioneers had many hardships to contend with, not the least being the depredations of the Indians and wild beasts. Later, during the Crimean war, the price of wheat rose from 30 cents to $2 per bushel, which, followed by the high prices obtaining during the American Civil War, gave many of the farmers their first real start, enabling them to bring in cattle, horses and sheep from Lower Canada and the United States.

The building of roads, under an Act of 1793, opened up the country, and soon grain, especially corn, was being exported. Cheese and butter were made, and a market was opened at Kingston in 1801. Wheat was the leading cereal produced, the valley of the Thames being noted for the quantity and quality of this grain. After the war of 1812, grants of 100 acres with provisions and implements were made to the soldiers. Legislation was passed to encourage the growing of hemp, but little success was obtained in the handling of this crop. According to the census of 1817, the Midland districts of Ontario contained 3,600 horses, 100 oxen, 6,185 cows and 1,654 young cattle.

Northwest Territories.—The earliest attempts at cultivation in the West date from the arrival of the Selkirk settlers at the Red river in 1812. The twenty-two men who composed the settlement immediately commenced to break the land, which was sown with winter wheat. The wheat crops of 1813 and 1814 were complete failures, owing both to lack of knowledge and to the fact that the only implement available for breaking the sod was the hoe. The yield of potatoes and turnips was, however, good, and the crop of 1815 was a success.

During the first few years of the settlement, there was great rivalry between the North-West Company and the Hudson's Bay Company, which ended in bloodshed in 1816. Many of the settlers were killed and the remainder fled up lake Winnipeg to Jack river. Early in 1817 a relief force was sent by Lord Selkirk, fort

Douglas was recaptured and the settlers were persuaded to return and resume farming. Misfortune, however, seemed to follow the efforts of this colony, its crops being wiped out by grasshoppers in 1818 and 1819. As the supply of seed was exhausted, some of the settlers went south to Wisconsin and, after much hard labour, returned with 250 bushels of seed. Small crops followed and the people were only saved from suffering and want by the generosity of Lord Selkirk.

In 1882 the population was 681 and the numbers of live stock were: horses, 78; oxen, 6; cattle, 48; calves, 39; sheep, 10; pigs, 12. The quantities of seed sown were in bushels: wheat, 235; barley, 142; corn, 12; potatoes, 570. The first satisfactory crop of grain was reaped in 1824, wheat yielding 44 bushels from the plough and 68 bushels after the hoe. It was gathered with the sickle and threshed with the flail. The crops varied during succeeding years, but by 1830 the colony was in a flourishing condition.

In the territories now known as the provinces of Saskatchewan and Alberta the agriculture of early days was limited to the trading posts of the Hudson's Bay Company. About these posts settlers grew vegetables, wheat, barley and oats.

British Columbia—Daniel Williams Harmon was the first farmer in British Columbia, settling in the Fraser Lake district. Entries in his diary show that in 1811, 1815 and other years, he planted potatoes, vegetables and barley and that the yields were large, one bushel of potatoes producing forty-one, and five quarts of barley sown yielding five bushels. For many years fine crops were grown in this district and at the posts of the Hudson's Bay Company, which, together with the North-West Company, was the pioneer in agriculture in British Columbia. In 1837 the Hudson's Bay Company had a large farm near fort Vancouver, producing grain, vegetables and other crops and carrying all kinds of live stock. They had large farms at Nisqually and Cowlitz and smaller ones on Vancouver island, Dr. John McLoughlin being one of the great promoters of agriculture. With the gold rush to the Cariboo in the 50's, and the springing up of mining camps, an impetus was given to farming. This was the beginning of stock raising in the valleys of the Thompson and Nicola. Later many of the miners turned to farming and stock raising.

Progress Since Confederation.

The political union of Canada, as effected under the British North America Act, 1867, did much to stimulate agricultural progress throughout Canada, especially as it allowed the establishment of the Dominion Department of Agriculture, whose efforts have been a powerful addition to those of the Provincial Departments of Agriculture. Universal agricultural depression in the eighties led to the creation of the experimental farm system and the consequent improvement of agricultural practice in many directions. Great changes in the incidence of farming operations were brought about by the opening up of the Prairie Provinces through the building of the Canadian Pacific Railway, completed for traffic in 1886. Various changes of fiscal policy on the part of both Canada and the United States have had important results. An influence, temporarily, in the wrong direction was the adoption in 1890 of the McKinley tariff, the effect of which was largely to exclude Canadian agricultural products from the United States. Grain growing in Ontario and Eastern Canada generally was adversely affected by this tariff and also by the rapidly increasing grain production of the Prairie Provinces under conditions of virginal fertility and low cost. These conditions diverted the trade in agricultural products from the United States to the United Kingdom and gave rise to the establishment in Eastern Canada of cheese factories and creameries and to an important export

trade in dairy products, especially cheese, to the United Kingdom. The introduction from Denmark in 1882 of the centrifugal cream separator was another noteworthy element in the expansion of the Canadian dairying industry. Through the efforts of the Dominion and Provincial Departments of Agriculture and other varied forms of associated activity, much improvement in agricultural practice has been accomplished. In connection with dairying alone the present practice of forcing milk production in the winter as well as in the summer, largely through the use of corn silage, was undreamed of a generation ago. Similar remarks apply to the year-round forcing of meat production, also a practice now followed by advanced farmers where the conditions are suitable.

Towards the end of the nineteenth century a policy of extensively advertising the agricultural possibilities of Canada for the attraction of new immigrants was vigorously pursued and proved highly successful. The annually increasing tide of fresh settlers, and the investment in Canada of large amounts of British capital, were indeed outstanding features of the first decade of the present century, and the extraordinary progress in the settlement and development of the Prairie Provinces was due to these factors. The number of new immigrants arriving in a single year reached its maximum in 1913 with 402,432. Then came the outbreak of the great war in 1914, causing a complete disruption of national life and entailing consequences profoundly affecting agriculture. Reviewing the period as a whole in the light of the statistics available, it may be stated that with a population of 8,966,834 as compared with 3,454,000, the acreage under wheat has grown from 1,646,781 in 1870 to 22,500,000 in 1922, and the wheat production, which was not more than 16¾ million bushels in 1870, reached the maximum of almost 400 million bushels in 1922.[1] Canada is, in fact, at the present time the world's second largest wheat-producing and wheat-exporting country, ranking next to the United States; indeed in the crop year ended July 31, 1923, Canadian wheat exports exceeded those of the United States. The value of all field crops, which in 1870 was estimated to be $196,789,000,[2] attained its maximum with $1,537,169,000 in 1919 and was $962,526,000 in 1922. For 1870 the value of farm live stock has been estimated at about $142,000,000, whilst in 1922 the estimated value was $681,887,000.

2.—The Government in Relation to Agriculture.

It is provided in section 95 of the British North America Act that "in each province the Legislature may make laws in relation to agriculture in the province"; it is also "declared that the Parliament of Canada may from time to time make laws in relation to agriculture in all or any of the provinces; and any law of the Legislature of a province relative to agriculture · · · · shall have effect in and for the province as long and as far only as it is not repugnant to any Act of the Parliament of Canada." In other words, the right of concurrent legislation by the Dominion Parliament and Provincial Legislatures is expressly established.

As a result of this provision, there exist at the present time Departments of Agriculture with Ministers of Agriculture at their head both in the Dominion and in all the nine provinces, though in most of the provinces the portfolio of agriculture is combined with one or more other portfolios in the hands of a single Minister. A short sketch of the functions of the various Departments is appended.

[1]The yield of wheat in 1923 is provisionally estimated by the Bureau of Statistics at 469,761,000 bushels.

[2]Monthly Bulletin of Agricultural Statistics, May, 1923, p. 185.

1.—The Dominion Department of Agriculture.

The Dominion Department of Agriculture was constituted in 1868 under authority of 31 Vict., c. 53, with numerous functions which were by no means purely agricultural, including (1) agriculture; (2) immigration and emigration; (3) public health and quarantine; (4) the marine and emigrant hospital at Quebec; (5) arts and manufactures; (6) the census, statistics and the registration of statistics; (7) patents of invention; (8) copyright; (9) industrial designs and trade marks.

In the course of time the purely agricultural work of the Department came to demand greater attention; the non-agricultural functions were one by one entrusted to other Departments of the Government, while specialization became the order of the day within the Department itself. At the present time it includes the following branches: (1) Experimental Farms; (2) Dairy and Cold Storage; (3) Health of Animals; (4) Live Stock; (5) Seed; (6) Entomological; (7) Fruit; (8) Publications; (9) Agricultural Instruction Act; (10) International Institute.

For the Acts of Parliament administered by the Dominion Department of Agriculture, see in the index "Acts of Parliament, list of principal, administered by Departments of Dominion Government." For the publications of the Department, covering a wide field of information, see in the index the entry "Publications of the Dominion Government."

2.—Provincial Departments of Agriculture.

Prince Edward Island.—The Department is under a Minister entitled Commissioner of Agriculture, and supervises agricultural instruction, the agricultural and technical high school, the cheese and butter factories, and the women's institutes of the province.

Nova Scotia.—The Department of Agriculture of Nova Scotia was in 1921 divided into six main branches: (1) Agricultural Societies, Exhibitions and Associations, (2) Horticultural Branch, (3) Entomological Branch, (4) Dairying Branch, (5) Poultry Branch, (6) Women's Institutes.

New Brunswick.—The branches of the New Brunswick Department were in 1921 as follows: Immigration and Farm Settlement, Elementary Agricultural Education, Agricultural Societies, Dairy Division, Live Stock Division, Horticulture Division, Soils and Crops Division, Poultry Division, Apiary Division, Women's Institute Branch and Entomological Branch.

Quebec.—The Quebec Department of Agriculture includes the following divisions: Dairy, Agronomy, Live Stock, Horticulture, Poultry, Council of Agriculture.

Ontario.—The Ontario Department of Agriculture includes the following branches: Agricultural Societies, Live Stock, Institutes and Dairy, Fruit, Co-operation and Markets, Statistics and Publications, Agricultural Representatives Branch (supervising the work of 48 local representatives in 1921), Colonization and Immigration. The Department conducts the affairs of the Ontario Agricultural College and the Ontario Veterinary College at Guelph, and the Agricultural School at Kemptville.

Manitoba.—The Manitoba Department of Agriculture includes an Agricultural Extension Service, a Weeds Commission, a Dairy Branch, a Publications and Statistics Branch, a Live Stock Branch, a Game Branch, besides operating the Manitoba Agricultural College.

Saskatchewan.—The Saskatchewan Department includes six principal branches: the Live Stock Branch, the Field Crops Branch, Dairy Branch, the Bureau of Statistics Branch, the Game Branch and the Co-operative Organization Branch.

Alberta.—The Alberta Department conducts the following main services: Dairy, Live Stock, Veterinary, Agricultural Schools and Demonstration Farms, Seeds and Weeds, Poultry, Fairs and Institutes, Branding, Crop Reports and Statistics.

British Columbia.—The branches of the Department of Agriculture are: Horticultural, Live Stock, Dairy, Inspection and Fumigation of Imported Fruits, Nursery Stock, etc., Entomology and Plant Pathology, Markets, Apiary Inspection, Statistics and Publications.

For the publications of the Provincial Departments of Agriculture, see in the index the entry "Publications of Provincial Governments."

3.—Agricultural Experiment Stations of Canada.

Among the most important contributions of Canadian Governments to the development of agriculture throughout the country, is the maintenance of agricultural experiment stations where research work in both plant and animal breeding and adaptation to climatic conditions is carried on. Already this work has had a profound effect in the improvement of Canadian agriculture: for example, in the year 1923 about 360,000,000 bushels of Marquis wheat, a variety produced at the Central Experimental Farm at Ottawa, were grown in Canada. Amongst the earlier experiments undertaken, the results of which have passed permanently into good Canadian farm practice, may be mentioned those relating to early seeding, summer fallowing, the use of farmyard manure, the fertilizing value of clover crops and the introduction into western agriculture of suitable grasses and clovers. Both the common red clover and alfalfa are now entering into western rotations as the result of efforts on the part of the farms to obtain hardy strains and to discover means of resistence to winter-killing. Further experiments with earlier-ripening and drought-resisting cereals are now being carried on, each new discovery increasing the cultivable area of Canada. Other researches relate to the production of frost-resisting fruit trees for the Prairie Provinces. This research work has already had a profoundly ameliorating effect upon the Canadian agriculture; a statement regarding the work now under way at the Dominion and Provincial experiment stations is appended.

Dominion Experimental Farms and Stations.

Central and Branch Farms.—Inaugurated in 1886 by Act of Parliament, the Dominion Experimental Farms system was at first made up of the Central Farm at Ottawa and four branch Farms: one at Nappan, Nova Scotia, for the Maritime Provinces; one at Brandon for Manitoba; one at Indian Head for the Northwest Territories, and one at Agassiz for British Columbia.

The opening up and rapid settlement of the Dominion have led to a corresponding increase in the number of Experimental Farms and Stations[1]. These, with the two Tobacco Stations, now total 24, with a total acreage of 12,757, as compared with the original five Farms, having a total acreage of 3,472, as established in 1886. The following table shows the present number of Farms and Stations with the acreage of each and the date of establishment.

[1] The five original farms established in 1886 are known as "Experimental Farms": those added since are styled "Experimental Stations." No distinction in the work is expressed by these titles.

DOMINION EXPERIMENTAL FARMS AND STATIONS, 1923.

Farm or Station.	Province.	Acreage.	Date established.
Central Farm, Ottawa	Ontario	467	1886
Kapuskasing Station	Ontario	1,282	1916
Harrow Tobacco Station	Ontario	249	1909
Charlottetown Station	Prince Edward Island	151	1909
Nappan Farm	Nova Scotia	460	1886
Kentville Station	Nova Scotia	434	1912
Fredericton Station	New Brunswick	520	1912
Ste. Anne de la Pocatière Station	Quebec	340	1911
Cap Rouge Station	Quebec	339	1911
Lennoxville Station	Quebec	455	1914
La Ferme Station	Quebec	1,200	1916
Farnham Tobacco Station	Quebec	65	1912
Brandon Farm	Manitoba	625	1886
Morden Station	Manitoba	302	1915
Indian Head Farm	Saskatchewan	680	1886
Rosthern Station	Saskatchewan	650	1908
Scott Station	Saskatchewan	520	1910
Swift Current Station	Saskatchewan	640	1920
Lacombe Station	Alberta	850	1907
Lethbridge Station	Alberta	400	1906
Invermere Station	British Columbia	53	1912
Summerland Station	British Columbia	550	1914
Agassiz Farm	British Columbia	1,400	1886
Sidney Station, Vancouver Island	British Columbia	125	1912

In addition there are nine sub-stations, viz.: Salmon Arm, B.C.; Swede Creek, Yukon Territory; Fort Vermilion, Grouard and Beaverlodge, Alberta; Forts Smith, Resolution and Providence, Northwest Territories; and Betsiamites, Saguenay County, Que. Experimental work under the Division of Illustration Stations is conducted on 15 farms in Saskatchewan, 11 in Alberta, 10 in British Columbia, 31 in Quebec, 10 in New Brunswick and 11 in Nova Scotia.

Organization of the System of Experimental Farms.—The Central Farm at Ottawa, as its name implies, is the centre or headquarters of the system. Thereat are situated the Director, having control and general supervision of the whole, and the chief technical officers, having charge each of his special line of work, both at the Central and Branch Farms. At Ottawa, the policy to be pursued throughout the system is settled by agreement after discussion by the Director, the technical officers and the superintendents on whose branch farms the work is to be conducted. The technical staff at Ottawa supervise the actual experimental work at the Central Farm. At the branches, the superintendents are in charge of the carrying out of the various lines of general experiment and also conduct experiments of local importance.

Exclusive of the Division of Bacteriology, about to be organized, the Divisions at Ottawa, which represent the different lines of work carried on throughout the system, and which have each a technical officer in charge, are as follows: (1) Animal Husbandry; (2) Bees; (3) Botany; (4) Cereals; (5) Chemistry; (6) Extension and Publicity; (7) Economic Fibre Production; (8) Field Husbandry; (9) Forage Plants; (10) Horticulture; (11) Illustration Stations; (12) Poultry and (13) Tobacco. Briefly the main lines of the work of these Divisions are as follows:—

Animal Husbandry.—This Division comprises work with beef cattle, dairy cattle and dairying, horses, sheep and swine, and undertakes experiments in the breeding, feeding, housing and management of each of these classes of live stock.

Bees.—The Bee Division covers the breeding, feeding and manipulation of bees, and the study of bee products, including their marketing.

Botany.—The work of this Division falls into two classes, economic botany and plant pathology. The former includes the study of medicinal, poisonous and economic plants. Different varieties and strains of fibre plants are also studied, and special attention is given to the life history and control of weeds. The Division has also charge of the arboretum at the Central Farm. In plant pathology, in addition to the pathological laboratory at Ottawa, there are laboratories at Charlottetown, P.E.I., Fredericton, N.B., St. Catharines, Ont., Brandon, Man., Indian Head, Sask., and Summerland, B.C. Investigations are being conducted into diseases affecting forest trees, fruit trees, cereals, small fruits, potatoes, vegetables and tobaccos.

Cereals.—In the Cereal Division, the work comprises the production, by cross-breeding and selection, of new varieties of grains and the testing of these as to their suitability for various parts of Canada. Approved varieties are grown on a larger scale and samples are distributed free to applicant farmers. Among the more recent varieties produced in this Division and now widely grown in Canada are the Arthur pea and the Huron, Marquis and Prelude wheats. Two interesting varieties now being introduced are the ruby wheat, ripening not quite as early as Prelude but yielding better, and the Liberty Hull-less oat, which should greatly widen the field of usefulness of this cereal and simplify the processes of its manufacture into food for man and beast. The Division also carries on extensive milling and baking tests.

Chemistry.—The work of the Division of Chemistry comprises the analysis of fodders and feeding stuffs, fertilizers, soils, well waters, insecticides, fungicides, etc. It also assists other Divisions in chemical problems and does a large amount of analytical work for other branches of the Department and for military and civilian use abroad. Field tests with various kinds and quantities of fertilizers are carried on by this Division at a number of the branch farms and stations.

Extension and Publicity.—This Division acts as a connecting link between the Experimental Farms and the farmer by making the work of the former as widely known as possible. Two chief means used are the exhibits at as many fairs as possible each year and the extension of the departmental mailing lists.

Economic Fibre Plants.—The Division studies the areas in Canada suitable for fibre production, the best varieties and strains of seed of fibre plants, cultural methods, harvesting, retting and scutching processes, etc. Chiefly for demonstrational purposes, the Division is operating at Clinton, Huron County, Ontario, a leased commercial flax mill.

Field Husbandry.—This Division applies, under field conditions, the results obtained by other Divisions more directly engaged in scientific research. Some of the main lines of work under way are tests of fertilizers, methods of drainage, rotations and cultural methods. Data of cost of production of field crops are gathered in connection with this work.

Forage Plants.—The Division has for its work the variety testing of grasses, leguminous forage plants, field roots and Indian corn; plant breeding with these; the collection of genera and species likely to be of value as forage plants; the study of the possibilities and methods of growing root seed, including sugar beets, in Canada, and the distribution for trial of seed of varieties newly obtained and not available commercially.

Horticulture.—The work of the Division of Horticulture falls under four main heads: vegetable gardening, orcharding and small fruits, ornamental gardening

and plant breeding. In the three first named, the testing of varieties is a main feature, with a view to ascertaining the hardiest, earliest, best-yielding and most disease-resistant sorts. In plant breeding, the aim is the improvement of existing sorts by cross-breeding. Greenhouse work is also given special attention at Ottawa. Canning experiments and demonstrations are carried on.

Illustration Stations.—This Division forms another connecting link between the Experimental Farms and the farmer. These Stations are now 88 in number. Each is located on the farm of a representative farmer, who does the work according to directions framed to illustrate the best rotations, the best varieties of crops, and the best cultural methods, as determined by the work of years on the Experimental Farms.

Poultry.—The scope of work of the Poultry Division has been greatly extended during the last few years. It now covers the following main lines of investigation: artificial and natural incubation, poultry breeding, systems of breeding and rearing, production of heavy-laying strains, feeding for eggs and table, and housing of poultry. Poultry survey work, *i.e.*, the endeavour to get groups of farmers in various localities to keep accurate records of their poultry costs and returns, is already showing results in the better housing, breeding and care of the farm flock. Egg-laying contests and record of performance work are carried on.

Tobacco.—The Tobacco Division deals with the breeding, variety tests and cultural methods, the warehousing and marketing of tobacco. A complete analysis of the soils of the tobacco-producing regions of Canada is being made. During the growing season, inspectors examine the tobacco fields of as many growers as possible, with a view to suggesting the best cultural methods and means of combating diseases and insect pests.

In addition to the work done by the Division of Extension and Publicity and Illustration Stations, the results of the work of the Experimental Farms are made available to the farmer (1) by correspondence; (2) by publications; (3) by "Seasonable Hints," now in its eighth year, a 16-page pamphlet brought out every four months, with a circulation of about 383,000; and (4) by articles in the press. The Farm officers devote considerable time each year, to lecturing, demonstrating, judging at fairs and assisting at Short Courses in Agriculture. Excursions to the various farms are also a valuable means of bringing the work to the attention of the farmer.

Provincial Experimental Farms and Stations.

Nova Scotia.

College of Agriculture, Truro.—About 430 acres are devoted to general farming, gardening and investigations. Conducted primarily as a college and distributing station for pure-bred live stock and seeds, investigational work does not occupy so prominent a position as it does at a purely experimental station. Nevertheless, practical experiments are being carried on, amongst which the following, together with those described on pages 305 and 306 of the 1921 Year Book, are the most important.

A permanent pasture experiment was begun twelve years ago to determine the value of top dressing with basic slag, acid phosphate and wood ashes. In addition to the foregoing, the application of crude kainite is now being tried on the permanent pasture. Fairly extensive experiments are being tried with Wild Kentish clover as a pasture crop.

Experiments to determine the fertilizing value of a crude salt mined at Malagash have given good results for mangolds, but results with other crops have not been impressive.

Three classes of silage crops are being tried under identical conditions, viz.: corn, sunflowers and O.P.V. (the college name for a mixture of oats, peas and vetches). The value of the O.P.V. mixture is now thoroughly proved under Nova Scotia conditions. Sunflowers have given good results for four years, but corn has proved very variable. A trench silo filled in 1922 gave very satisfactory results. Field and garden experiments have shown good results from the use of home grown oats, wheat, turnips and tomatoes, as compared with seed of these crops grown elsewhere. Experiments already carried on for two years are being continued in the control of scab in potatoes by the application of ground sulphur and inoculated sulphur. Experiments have been conducted in the control of the cabbage root maggot, and with insects affecting orchard fruits, carrots and other vegetables. The cabbage root maggot is now perfectly controlled, but further work remains to be done with other root and vegetable pests. Extensive experiments in the control of insect pests on fruit trees are being carried out, mainly at points in the Annapolis valley, where conditions are more favourable for such investigations than at the college. Model orchards at some 35 localities outside of the recognized fruit belt are operated to determine varieties and methods suitable for these localities. Details of the college experimental work, including results obtained, are published in the Annual Report of the Secretary for Agriculture for the Province.

The College enrols about 50 to 100 students annually in its regular course and from 200 to 300 annually in various short courses. Numerous extension short courses are annually conducted at various centres in the province.

A college prospectus, issued annually, contains complete accounts of the nature of the studies in these courses.

Quebec.

Macdonald College, Ste. Anne de Bellevue.—The College is situated about 20 miles west of Montreal and is incorporated with McGill University. The College property comprises 786 acres, divided as follows: main farm, 584 acres; cereal husbandry plots, 75 acres; poultry department, 17 acres; orchard, 35 acres; vegetable gardens, 25 acres; the campus, including driveways, lawns, trees, shrubs, flower beds, school garden and recreation fields for students of both sexes, 50 acres. The agricultural engineering, animal husbandry, bacteriology, botany, cereal husbandry, chemistry, horticulture, physics, poultry, zoology, and entomology departments are all well equipped for the numerous researches and experiments under way. In the *School of Agriculture*, the courses offered include 4-year courses, leading to the B.S.A. and B.Sc. in Agr. degrees, a 4½ months winter practical course for farmers and farmers' sons, and various short courses. Postgraduate work can be taken in cereal husbandry, entomology, plant pathology, bacteriology, etc.—the higher degrees offered being M.S.A., M.Sc. and Ph.D. In the *School of Household Science*, the courses include a 4-year course, leading to the degree of Bachelor of Household Science, a 2-year institution administration course, a 1-year homemaker course, three short courses each of about 3 months duration in household science, etc. In the *School for Teachers*, courses under the Protestant Committee of the Council of Public Instruction of the Province of Quebec are offered leading to model, kindergarten and elementary diplomas. The teaching and experimental staff of the College consists of about 60 members. The total enrolment for 1921-22 was 762. More complete information respecting the work of the College will be

found on record in the Canada Year Book of 1916-17, pp. 241-242, and 1918, pp. 235-237. The annual report of the College and the annual announcement should be consulted.

Oka Agricultural Institute.—Situated on the Lake of Two Mountains, about 20 miles from Montreal, the Oka Agricultural Institute is one of the oldest experimental farms in Canada. It was affiliated to Laval University of Montreal (now University of Montreal) on March 25, 1908. The total area of the farm comprises 1,800 acres, including all kinds of soil. Horticulture holds an important place. The area devoted to fruit trees is about 40 acres, and includes 4,000 trees (apples, cherries, pears and plums) grown according to the most recent methods. Special attention is given to the breeding of live stock. The dairy herd is of considerable importance and has been entirely formed at the Institute itself. Official milk records begun in 1918 have already resulted in the registration of 52 animals in the "Record of Performance," with an average yield exceeding 10,000 lb. of milk. The raising of swine, poultry and bees is also practised. The poultry houses shelter thousands of birds, amongst them the famous hen "Chantecler," bred by the poultry manager and registered in the United States Standard of Perfection in 1921. Mention should also be made of the modern rabbit hutch, 70 ft. x 13 ft., probably unique of its kind in Canada. The Institute can accommodate about 150 indoor students. The present curriculum includes (1) a scientific course of four years leading to the University degree of B.S.A.; (2) a practical course of two years for young men less advanced, embracing all the principal agricultural subjects such as general agriculture, cereals, fodder plants, rural and hygienic construction, machines and motors, the cultivation of fruits and vegetables and the breeding and utilization of farm live stock. The famous Oka cheese (Port du Salut) made at this Institute is widely known throughout the North American continent.

School of Agriculture, Ste. Anne de la Pocatière.—This school, with accommodation for 125 boarders, is situated on the southern slope of a hill dominating a farm of nearly 600 acres. Within one mile of the Intercolonial Railway and on the Quebec-Rivière-du-Loup line, it is easily accessible, and attracts thousands of visitors, who seek agricultural information from both the School and the Dominion Experimental Station, which is not more than a mile from the village. The students of the School are divided into (1) those taking a four-years' agronomic course, and (2) those receiving special practical training for two years. The School is affiliated to Laval University, Quebec, which awards the degree of B.S.A. (Bachelor of Science in Agriculture) to successful students of the first class, whilst those in the other receive a Certificate of Agricultural Proficiency (Brevet de Capacité Agricole). Lectures in adjacent parishes are frequently given by the School professors, who also conduct agricultural pages in two of the largest provincial weeklies for the extension of new agricultural information. Cultural experiments are also undertaken at the School, and bulletins are published.

Ontario.

Ontario Agricultural College and Experimental Farm, Guelph.—The College and Experiment Station were established in 1874 to train young farmers in the science and practice of agriculture and to conduct agricultural experiments for the benefit of the province. The land property consists of a little more than 700 acres of average loam soil. The farm property consists of 500 acres; experimental plots of about 100 acres and campus and woodlots form the remainder. The growth of the institution as an educational centre has been very rapid. Academic work

at the present time requires the space and equipment of sixteen large buildings for dormitories, class rooms and laboratories. Courses offered include a four-year course for the degree of B.S.A. (Bachelor of Science in Agriculture), a two-year course for the Associate Diploma, winter courses for farmers and farmers' sons, summer courses for teachers of the province and domestic science courses at Macdonald Institute. The teaching and experimental staff consists of about seventy-five members. In 1874 the College opened with 28 students. The total enrolment in long and short courses in the academic year 1921-22 was 2,112. More complete information respecting the researches and experimental work undertaken at the college will be found on record in the Canada Year Book of 1916-17, pp. 243-245, and 1918, pp. 238-241. Also reference may be made to the Forty-seventh Annual Report of the College, covering the year 1921.

Manitoba.

Manitoba Agricultural College, Winnipeg.—Field husbandry experiments are conducted in five divisions: (1) Forage Crop Improvement; (2) Cereal Crop Improvement; (3) Soil and Crop Management; (4) Co-operative Experiments; and (5) Studies in Quality of Farm Crops. The work of the Forage Crops Improvement Division has for its object the production and improvement of plants suitable under Manitoba conditions for pasture, hay and fodder. Varieties and strains of forage crops have been imported from the United States and European countries, and improvement is being obtained by selection and hybridization. The major investigations are being conducted with alfalfa and red clover, but work is also being done with sweet clover, timothy, western rye, brome, meadow fescue and meadow foxtail. Profitable results have been obtained in fodder corn, especially by securing early maturing strains. In the Cereal Crop division, the work consists of the testing and classification of cereal varieties with a view to standardization. The crops under study are wheat, oats, barley, flax, spring and fall rye, peas and buckwheat. Introductions of cereals have been made from various parts of the world, and selections have been made which promise to be of value. Hybridization for improvement is also followed, and some promising crosses are now under test. In the Soil and Crop Management division the projects include soil renovation and soil cultivation experiments, experiments in cereal crops, perennial and annual forage crops, hoed crops and cropping sequence. Work is also being done in silage and in ascertaining the carrying capacity of the grasses and clovers when used for pasture. Co-operative experiments are being conducted in order to determine the varieties and practices best suited to the different agricultural zones of the province. These experiments are being conducted with both government institutions and individual farmers. In this work experimental fields, on which complete variety tests, fertility tests and management tests are made, are operated at the Birtle Demonstration Farm, Killarney Demonstration Farm, Teulon High School Farm, Elkhorn Indian School Farm, and Pas Indian School Farm. Tests in which farmers are trying out three or more varieties or methods are in operation at about 100 places. In addition to this, considerable work is being done co-operatively on the reclamation of peat lands and drifting soils. Studies in quality of farm crops are being conducted with wheat and barley. In the former case milling and baking tests have been made of wheat from different points of the province with an idea of establishing the quality of wheat grown under different soil and climatic conditions.

The Departments of Botany and Horticulture, Animal Husbandry, Physics, Chemistry and Engineering are also carrying on numerous investigations.

Saskatchewan.

University of Saskatchewan, Saskatoon.—The College of Agriculture has over 1,300 acres of land at the University and another 560 acres about 35 miles distant which were bequeathed to the College by a pioneer settler, an ex-student of the University of Cambridge, England. Of the 1,300 acres, 210 acres are set aside for experimental work in field husbandry and horticulture. Two hundred and seventy acres of prairie were purchased in 1918, 100 acres of which have been broken for the Field Husbandry Department. The remaining 800 acres are operated as a general farm with great diversification of crops. The buildings, paddocks, etc., are located on an adjoining half section of land designated as the campus or building plot. The College offers a four-year course leading to the degree of Bachelor of Science in Agriculture (B.S.A.), and a three-year associate course for farmers' sons intending to make farming their life work. Short courses in general agriculture, tillage, crops, live stock, poultry, dairying and engineering, are held for adult farmers during the winter months, both at the College and at various points throughout the province.

Practical experiments are undertaken in the departments of field and animal husbandry, as well as a variety of scientific investigations in the departments of chemistry, physics, biology, engineering, etc.

Alberta.

College of Agriculture, Edmonton South.—A College of Agriculture has been established at the University of Alberta, Edmonton South. A definite four-year course with matriculation entrance leading to the B.Sc. degree is under way. Students from the provincial schools of agriculture will enter the second year of the course after satisfying special entrance requirements. At these schools various experiments are in progress as described in the 1920 edition of the Year Book, p. 286. At the College itself numerous agricultural experiments are also being conducted, including the following tests: Determination as to whether the present varieties of wheat, oats, barley and peas are suitable for the Park Belt sections of Alberta; breeding and selection of promising varieties of wheat for earlier maturity combined with high milling qualities; the testing of alfalfas, red clover, sweet clover and alsike for winter hardiness and of sweet clover in the Open Plains sections to determine its drought hardiness; varieties of corn and sunflowers for fodder; relative suitability of corn and sunflowers for the Park Belt; selection of a suitable grain corn for the dry sections; growth of alfalfa and sweet clover for hay and seed; nurse crops with clover and timothy. Extensive experiments in the feeding of cattle, sheep and swine have been under way for three or four years. They include both winter feeding and summer pasture work. Other researches have been made on the utilization of the best native grasses of Alberta; hay and pasture production; effects of frost on grain; production of alfalfa seed; factors of hardiness in winter wheat; sunflowers; potatoes; seed production; various experiments with cattle, sheep and swine. A start has been made in a definite soil survey of the province, beginning with the soil-blown area of the south.

British Columbia.

Department of Agriculture.—*Horticultural Branch.*—Demonstration work in continuation of researches previously undertaken was again carried on this year. This included work on the control of the strawberry root weevil (*Otiorhynchus ovatus*, Linn.) and the various strengths of lime-sulphur sprays to be used in the

control of apple scab. Soil work was also continued along the line of cover crops as well as the use of commercial fertilizers. New work was undertaken in the use of oil sprays for the control of blister mite, oyster-shell scale and leaf roller, and also in the commercial use of spreaders for spraying work.

Soil and Crop Branch.—The seed potato inspection and certification work started in 1921 by the Soil and Crop Branch was continued and extended during 1922, in co-operation with the provincial plant pathologist.

University of British Columbia.—Progress has been made with the clearing and preparation of land for experimental and general farm purposes. The results obtained by the departments of agronomy and horticulture are becoming increasingly valuable, especially for farmers and gardeners cultivating upland coast soils. In the department of animal husbandry, excellent foundation stock has been purchased, consisting of Jerseys, Ayrshires, Shorthorns and Herefords, and good Yorkshire and Berkshire pigs and Southdown, Shropshire and Oxford Down sheep have also been acquired. Seven Clydesdale mares formerly at Colony Farm now form the horse-breeding nucleus. Departments of dairying and poultry have been organized, and are carrying on investigational and instructional work. In addition to the teaching and investigational work at the University, the members of the Faculty of Agriculture, in co-operation with the Dominion and Provincial Governments, have organized and conducted considerable extension work throughout the province.

3.—Statistics of Agriculture.

Annual Statistics.—Since 1918 the Dominion Bureau of Statistics, in co-operation with the nine Provincial Governments, has been collecting annually the basic agricultural statistics of Canada. These statistics are secured by means of a simple schedule calling for a statement of the areas sown to field crops and of the numbers of farm animals alive on June 15. When completed they are compiled into totals by the Bureau, and the areas as finally estimated form the basis for the estimation during the growing season and after harvest of the yields of field crops. These yields are estimated in each district by the experienced crop correspondents of the Bureau. In 1922 schedules were returned for about 25 p.c. of the farms of the Dominion, and, on the basis of these 25 p.c., estimates for the field crops and live stock of the Dominion were prepared.

In six of the provinces the schedules were distributed in 1923 through the agency of the rural schools, in British Columbia and in Prince Edward Island they were mailed direct to farmers; in Quebec, through the co-operation of the Quebec Bureau of Statistics, the schedules were distributed by local agents under the direction of the agronomists or district agricultural representatives. This system has been found effective in securing a larger sample of the farms of the country than could be obtained in any other way.

Census Statistics.—At each of the six decennial censuses of Canada taken since Confederation, statistics of the agricultural activities carried on throughout the country have been secured, such, for example, in the later censuses, as the acreage sown, the yield of crops, the value of that yield, the number of fruit trees, the value of farms, the number of live stock, etc. In the publication of the results of each of these censuses, a special volume has been devoted to agricultural (and horticultural) activities, and this will be the case in the publications of the census of 1921, some of the results of which are used in the following statistics. Censuses of population and agriculture have also been taken for the three Prairie Provinces in 1906 and 1916.

Presentation of Agricultural Statistics.—In the current edition of the Year Book, the statistics of agriculture are presented under the following headings:—(1) Acreage, yield, quality and value of crops, (2) Farm live stock and poultry, (3) Fur farming, (4) Dairying, (5) Fruit, (6) Farm labour and wages, (7) Prices, (8) Miscellaneous, (9) Summary of agricultural revenue and agricultural wealth, (10) World statistics of agriculture.

1.—Acreage, Yield, Quality and Value of Crops.

Field Crops, 1917-22.—In Table 1 are presented for Canada, by provinces, estimates of the area, yield, quality and value of the principal field crops for each of the six years 1917 to 1922, with the five-year averages for the period 1917 to 1921.[1] The estimates of 1922 are based upon statistics collected from about 168,000 farmers throughout Canada in June of that year under arrangements made between the Dominion and Provincial Governments in accordance with plans dating from 1917 for the four provinces of Quebec, Saskatchewan, Alberta and British Columbia, and from 1918 for the remaining five provinces of Prince Edward Island, Nova Scotia, New Brunswick, Ontario and Manitoba. As was pointed out in previous editions of the Year Book (see 1920 edition, p. 188), comparability with the statistics of 1917 and 1918 was somewhat affected by the change in the method of estimation which then took place. In estimating totals for the year 1922 it was possible to use a preliminary count of the number of farms, according to the schedules of the census of 1921 as received and compiled.

Season of 1921-22.—Taken altogether, the Canadian agricultural season of 1922 was of marked excellence. In parts of the Dominion, notably British Columbia and the northern and central districts of Alberta and Saskatchewan, severe drought prevailed during the growing season up to the end of July; but in the southern districts of Alberta and Saskatchewan the rainfall was ample, and the grain crops were superior to any since 1915. These conditions were a very welcome change from a series of bad seasons in the southern and drier districts of the two provinces. In Manitoba and Ontario an excellent all-round harvest was gathered. In Quebec the grain crops were generally good, and the yields were superior to those of last year. Potatoes however in this province, as a consequence of drought in September following excessive rains, did not realize early expectations, and the tubers were as a rule small and few. Abundant rains in the Atlantic provinces resulted in good grain crops, but the yield of potatoes was below average, and the wet season induced rotting. The fall of 1922 was fine and mild, enabling cattle to be kept out of doors until a late date; and in most parts of the Dominion live stock entered upon the winter with plentiful supplies in prospect.

Areas and Yields of Grain Crops.—The total yield of wheat in Canada for the year 1922 was finally estimated at 399,786,400 bushels from an area of 22,422,693 acres, as compared with 300,858,100 bushels from 23,261,224 acres in 1921 and with 236,025,200 bushels from 18,545,863 acres, the annual average for the five years 1917-21. The total for 1922 consisted of 18,956,000 bushels from 892,569 harvested acres of fall wheat and of 380,830,400 bushels from 21,530,124 sown acres of spring wheat. The total wheat crop of 399,786,400 bushels, as finally estimated, was the largest on record for Canada, and compares with 393,542,600 bushels, the previous record crop of 1915. The average yield per acre of all wheat

[1] Statistics of acreage, yield, and value of various field crops collected at the decennial censuses since 1871 will be found in the "Statistical Summary of the Progress of Canada," immediately following the Table of Contents.

for 1922 worked out at 17¾ bushels, as compared with 13 bushels in 1921, with 12¾ bushels, the five-year average, and with 26 bushels, the record for 1915. For fall wheat the average yield per acre in 1922 was 21¼ bushels, as against 21½ bushels in 1921 and 22¼ bushels, the five-year average. For spring wheat the 1922 average was 17¾ bushels, as compared with 12¾ bushels in 1921 and 12¼ bushels, the five-year average.

Oats yielded in 1922 the total of 491,239,000 bushels from 14,541,229 acres, as compared with 426,232,900 bushels from 16,949,029 acres in 1921, with 530,709,700 bushels from 15,849,928 acres, the record crop of 1920 and with 436,130,380 bushels from 15,170,961 acres, the annual average for the five years 1917-21. The average yield per acre for 1922 was 33¾ bushels, as against 25¼ bushels in 1921 and 28¾ bushels, the five-year average. Barley yielded a total of 71,865,300 bushels from 2,599,520 acres, as compared with 59,709,100 bushels from 2,795,665 acres in 1921 and with 62,350,808 bushels from 2,707,801 acres, the five-year average. The average yields per acre were 27¾ bushels in 1922, 21¼ bushels in 1921 and 23 bushels, the five-year average. Flaxseed gave a total yield of 5,008,500 bushels from 565,479 acres, as compared with 4,111,800 bushels from 533,147 acres in 1921 and with 5,914,480 bushels from 1,008,409 acres, the five-year average. The yield per acre was 8·85 bushels in 1922, 7¾ bushels in 1921 and 5·85 bushels, the average.

For the remaining cereal crops, the total yields for 1922 were in bushels as follows, the corresponding totals for 1921 and for the five-year average being shown within brackets: Rye 32,373,400 (21,455,260; 11,066,132); peas 3,170,100 (2,769,-981; 3,408,824); beans 1,303,300 (1,089,900; 1,716,236); buckwheat 9,701,200 (8,230,100; 9,260,100); mixed grains 27,707,700 (22,271,500; 26,872,656); and corn for husking 13,798,000 (14,904,000; 13,629,440).

Root and Fodder Crops.—Expressed in centals of 100 lb., the yield of potatoes in 1922 was 55,745,300 from 683,594 acres, as compared with 64,407,600 centals from 701,912 acres in 1921, and with 66,118,860 centals from 739,474 acres, the five-year average. The yield per acre of 1922 was 81½ centals, compared with 91¾ centals in 1921 and with 89½ centals, the five-year average. Turnips, mangolds, etc., produced a total of 43,973,500 centals from 224,256 acres in 1922, as against 39,575,150 centals from 227,675 acres in 1921 and with 49,398,040 centals from 275,705 acres, the five-year average. The yield per acre in 1922 was 196 centals, as compared with 173¾ centals in 1921 and with 179 centals the average. Sugar beets produced 190,400 tons from 20,725 acres in 1922, as against 268,000 tons from 28,367 acres in 1921 and 243,600 tons from 24,231 acres, the average. The yield per acre was in 1922, 9·20 tons, in 1921, 9·45 tons and for the average 10 tons. Of hay and clover the total yield was in 1922 14,488,200 tons from 10,001,667 acres, as compared with 11,366,100 tons from 10,614,951 acres in 1921 and with 13,901,960 tons from 10,071,857 acres, the average. The yield per acre was 1·45 ton in 1922, 1·07 ton in 1921 and 1·40 ton, the average. Grain hay in Alberta and British Columbia gave a total yield in 1922 of 1,624,100 tons, as compared with 1,288,976 tons in 1921. Of alfalfa, the total yield in 1922 was 806,400 tons from 305,933 acres, as compared with 662,200 tons from 263,892 acres, and with 489,798 tons from 207,114 acres, the five-year average. The yield per acre was 2·65 tons in 1922, 2½ tons in 1921 and 2·35 tons the average for the five years. Fodder corn yielded 5,879,000 tons from 654,624 acres in 1922, as against 6,361,600 tons from 585,395 acres in 1921 and with 4,884,796 tons from 510,946 acres, the average. The yield per acre in 1922 was 9 tons, as against 10¾ tons in 1921 and 9½ tons the five-year average.

Values of Field Crops.—The average prices per unit, as received by farmers in 1922, are estimated from the reports of crop correspondents for all Canada as follows, the corresponding prices for 1921 and for the five-year average 1917-21 being given within brackets: Per bushel: Fall wheat $1.01 ($1.02; $1.89); spring wheat 84 cents (80 cents; $1.65); all wheat 85 cents (81 cents; $1.66); oats 38 cents (34 cents; 62 cents); barley 46 cents (47 cents; 92 cents); rye 58 cents (72 cents; $1.15); peas $1.84 ($1.96; $2.78); beans $2.85 ($2.90; $5.02); buckwheat 84 cents (89 cents; $1.36); mixed grains 60 cents (62 cents; $1.05); flaxseed $1.72 ($1.44; $2.66); corn for husking 83 cents (83 cents; $1.32); Per cental: potatoes 90 cents ($1.28; $1.55); turnips, mangolds, etc., 54 cents (67 cents; 86 cents). Per ton: hay and clover $13.46 ($23.56; $19.24); alfalfa $12.77 ($19.95; $19.97); fodder corn $4.97 ($7.05; $6.80); grain hay $12.87 ($12.17, 1921); sugar beets $7.88 ($6.50; $10.07).

The total values of field crops in 1922 are estimated as follows, the corresponding values for 1921 and for the five-year average 1917-21 being given within brackets: Wheat $339,419,000 ($242,936,000; $392,546,320); oats $185,455,000 ($146,395,300; $270,406,080); barley $33,335,300 ($28,254,150; $57,487,784); rye $18,703,200 ($15,399,300; $12,744,150); peas $5,818,200 ($5,439,400; $9,467,240); beans $3,713,800 ($3,155,800; $8,613,200); buckwheat $8,140,800 ($7,285,100; $12,618-020); mixed grains $16,500,700 ($13,901,220; $28,088,214); flaxseed $8,638,900 ($5,938,400; $15,747,620); corn for husking $11,509,700 ($12,317,000; $18,040,080); potatoes $50,320,000 ($82,147,600; $102,776,960); turnips, mangolds, etc., $23,886,000 ($26,620,400; $42,259,360); hay and clover $194,950,000 ($267,764,200; $267,459,520); grain hay $20,910,000 ($14,476,000 in 1921); alfalfa $10,295,000 ($13,211,000; $9,780,740); fodder corn $29,197,600 ($44,880,800; $33,207,060); sugar beets $1,500,000 ($1,742,000; $2,453,100). The aggregate value of all field crops in 1922 is $962,293,200, as compared with $931,863,670 in 1921.

1.—Area, Yield, Quality and Value of Principal Field Crops in Canada, 1917-22 and Five-Year Average, 1917-21.

Field crops.	Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per bushel.	Total value.
	acres.	bush.	bush.	lb.	$	$
Canada—						
Fall wheat.....1917	725,300	21·50	15,533,450	59·37	2·08	32,336,900
1918	416,615	19·00	7,942,800	61·19	2·08	16,516,000
1919	672,793	23·75	16,006,000	61·20	2·45	39,336,000
1920	814,133	24·00	19,469,200	60·14	1·88	36,550,500
1921	720,635	21·50	15,520,200	58·77	1·02	15,846,000
1922	892,569	21·25	18,956,000	59·91	1·01	19,059,000
Averages.....1917-21	669,895	22·25	14,894,330	60·13	1·89	28,117,080
Spring wheat.....1917	14,030,550	15,50	218,209,400	59·48	1·93	420,701,700
1918	16,937,287	10·75	181,132,550	58·69	2·02	365,161,700
1919	18,453,175	9·50	177,254,400	58·53	2·36	418,386,000
1920	17,418,241	14·00	243,720,100	59·07	1·60	390,806,800
1921	22,540,589	12·75	285,337,900	58·10	0·80	227,090,000
1922	21,530,124	17·75	380,830,400	60·31	0·84	320,360,000
Averages.....1917-21	17,875,968	12·25	221,133,870	58·77	1·65	364,429,240
All wheat.....1917	14,755,850	15·75	233,742,850	59·46	1·94	453,038,600
1918	17,353,902	11·00	189,075,350	59·44	2·02	381,677,700
1919	19,125,968	10·00	193,260,400	59·12	2·37	457,722,000
1920	18,232,374	14·50	263,189,300	59·35	1·62	427,357,300
1921	23,261,224	13·00	300,858,100	58·11	0·81	242,936,000
1922	22,422,693	17·75	399,786,400	60·24	0·85	339,419,000
Averages.....1917-21	18,545,863	12·75	236,025,200	59·10	1·66	392,546,320

1.—Area, Yield, Quality and Value of Principal Field Crops in Canada, 1917-22 and Five-Year Average, 1917-21—con.

Field crops.	Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per bushel.	Total value.
	acres.	bush.	bush.	lb.	$	$
Canada—con.						
Oats.....1917	13,313,400	30·25	403,009,800	33·55	0·69	277,065,300
1918	14,790,336	28·75	426,312,500	35·61	0·78	331,357,400
1919	14,952,114	26·25	394,387,000	34·16	0·80	317,097,000
1920	15,849,928	33·50	530,709,700	35·62	0·53	280,115,400
1921	16,949,029	25·25	426,232,900	32·97	0·34	146,395,300
1922	14,541,229	33·75	491,239,000	35·68	0·38	185,455,000
Averages.....1917-21	15,170,961	28·75	436,130,380	34·38	0·62	270,406,080
Barley.....1917	2,392,200	23·00	55,057,750	46·97	1·08	59,651,400
1918	3,153,711	24·50	77,287,240	47·24	1·00	77,378,670
1919	2,645,509	21·25	56,389,400	46·32	1·23	69,330,300
1920	2,551,919	24·75	63,310,550	47·62	0·83	52,821,400
1921	2,795,665	21·25	59,709,100	46·05	0·47	28,254,150
1922	2,599,520	27·75	71,865,300	47·66	0·46	33,335,300
Averages.....1917-21	2,707,801	23·00	62,350,808	46·84	0·92	57,487,784
Rye.....1917	211,880	18·25	3,857,200	53·44	1·62	6,267,200
1918	555,294	15·25	8,504,400	55·60	1·49	12,728,600
1919	753,081	13·50	10,207,400	55·09	1·40	14,240,000
1920	649,654	17·50	11,306,400	55·44	1·33	15,085,650
1921	1,842,498	11·75	21,455,260	55·06	0·72	15,399,300
1922	2,105,367	15·50	32,373,400	55·71	0·58	18,763,200
Averages.....1917-21	802,481	13·75	11,066,132	54·93	1·15	12,744,150
Peas.....1917	198,881	15·25	3,026,340	59·81	3·54	10,724,100
1918	235,976	18·25	4,313,400	59·93	2·99	12,899,100
1919	230,351	14·75	3,406,300	59·60	2·86	9,739,300
1920	186,348	19·00	3,528,100	60·44	2·42	8,534,3
1921	192,749	14·25	2,769,981	59·42	1·96	5,439,400
1922	178,890	17·75	3,170,100	60·08	1·84	5,818,200
Averages.....1917-21	208,861	16·25	3,408,824	59·84	2·78	9,467,240
Beans.....1917	92,457	13·75	1,274,000	59·70	7·45	9,493,400
1918	228,577	15·50	3,563,380	58·67	5·41	19,283,900
1919	83,577	16·50	1,388,600	59·99	4·48	6,214,860
1920	72,163	17·50	1,265,300	59·73	3·88	4,918,100
1921	62,479	17·50	1,089,900	59·30	2·90	3,155,800
1922	79,899	16·25	1,303,300	59·39	2·85	3,713,800
Averages.....1917-21	107,851	16·00	1,716,236	59·48	5·02	8,613,200
Buckwheat.....1917	395,977	18·00	7,149,400	46·49	1·46	10,443,400
1918	548,097	20·75	11,375,500	47·41	1·58	18,018,100
1919	444,732	23·50	10,550,800	47·23	1·50	15,831,000
1920	378,476	23·75	8,994,700	47·95	1·28	11,512,500
1921	360,758	22·75	8,230,100	47·35	0·89	7,285,100
1922	430,982	22·50	9,701,200	47·80	0·84	8,140,800
Averages.....1917-21	425,608	21·75	9,260,100	47·29	1·36	12,618,020
Mixed grains.....1917	497,236	32·50	16,157,080	44·41	1·16	18,801,750
1918	921,826	38·75	35,662,300	46·39	1·14	40,726,500
1919	901,612	31·00	27,851,700	44·83	1·36	37,775,400
1920	811,634	40·00	32,420,700	44·65	0·90	29,236,200
1921	861,136[1]	25·75	22,271,500	41·62	0·62	13,901,220
1922	779,800	35·50	27,707,700	44·33	0·60	16,500,700
Averages.....1917-21	798,689	33·75	26,872,656	44·38	1·05	28,088,214
Flaxseed.....1917	919,500	6·50	5,934,900	54·73	2·65	15,737,000
1918	1,068,120	5·75	6,055,200	53·72	3·13	18,951,000
1919	1,093,115	5·00	5,472,800	55·14	4·13	22,609,500
1920	1,428,164	5·60	7,997,700	54·79	1·94	15,502,200
1921	533,147	7·75	4,111,800	54·34	1·44	5,938,400
1922	565,479	8·85	5,008,500	55·04	1·72	8,638,900
Averages.....1917-21	1,008,409	5·85	5,914,480	54·54	2·66	15,747,620
Corn for husking.....1917	234,339	33·00	7,762,700	56·18	1·84	14,307,200
1918	250,000	56·75	14,205,200	53·97	1·75	24,902,800
1919	264,607	64·00	16,940,500	–	1·34	22,080,000
1920	291,650	49·25	14,343,800	56·45	1·16	16,593,400
1921	296,866	50·25	14,904,000	55·56	0·83	12,317,000
1922	318,397	43·25	13,798,000	55·45	0·83	11,509,700
Averages.....1917-21	267,492	51·00	13,629,440	55·54	1·32	18,040,080

[1]Including "Other grains" in Manitoba.

1.—Area, Yield, Quality and Value of Principal Field Crops in Canada, 1917-22 and Five-Year Average, 1917-21—con.

Field crops.	Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per cental.	Total value.
	acres.	centals.	centals.	lb.	$	$
Canada—con.						
Potatoes.....1917	656,958	72·95	47,935,200	–	1·69	80,864,400
1918	735,192	85·15	62,607,720	–	1·63	102,235,300
1919	818,767	92·00	75,344,940	–	1·58	118,894,200
1920	784,544	102·35	80,298,840	–	1·62	129,803,300
1921	701,912	91·75	64,407,600	–	1·28	82,147,600
1922	683,594	81·55	55,745,300	–	0·90	50,320,000
Averages.....1917-21	739,474	89·40	66,118,860	–	1·55	102,776,960
Turnips, mangolds, etc..1917	218,233	145·35	31,725,500	–	0·92	29,253,000
1918	325,037	188·75	61,349,800	–	0·85	52,252,000
1919	317,296	176·95	56,144,300	–	0·98	54,958,700
1920	290,286	200·45	58,195,450	–	0·83	48,212,700
1921	227,675	173·80	39,575,150	–	0·67	26,620,400
1922	224,256	196·10	43,973,500	–	0·54	23,886,000
Averages.....1917-21	275,705	179·15	49,398,040	–	0·86	42,259,360
		tons.	tons.		per ton.	
Hay and clover.....1917	8,225,034	1·66	13,684,700	–	10·33	141,376,700
1918	10,544,625	1·40	14,772,300	–	16·25	241,277,300
1919	10,595,383	1·55	16,348,000	–	20·72	338,713,200
1920	10,379,292	1·30	13,338,700	–	26·10	348,166,200
1921	10,614,951	1·07	11,366,100	–	23·56	267,764,200
1922	10,001,667	1·45	14,488,200	–	13·46	194,950,000
Averages.....1917-21	10,071,857	1·40	13,901,960	–	19·24	267,459,520
Grain hay, (Alberta)....1921	–	–	1,133,476	–	10·00	11,335,000
1922	1,220,000	1·25	1,525,000	–	12·00	18,300,000
Grain hay (B.C.).....1919	60,390	2·50	151,000	–	29·00	4,379,000
1920	60,612	2·25	136,400	–	33·12	4,518,000
1921	57,603	2·70	155,500	–	20·20	3,141,000
1922	56,626	1·75	99,100	–	26·34	2,610,000
Averages.....1919-21	59,535	2·50	147,633	–	27·18	4,012,667
Alfalfa.....1917	109,825	2·39	262,400	–	11·59	3,041,300
1918	196,428	2·25	446,400	–	17·84	7,963,500
1919	226,869	2·20	494,200	–	21·85	10,800,200
1920	238,556	2·45	583,790	–	23·79	13,887,700
1921	263,892	2·50	662,200	–	19·95	13,211,600
1922	305,933	2·65	806,400	–	12·77	10,295,060
Averages.....1917-21	207,114	2·35	489,798	–	19·97	9,780,740
Fodder corn.....1917	366,518	7·34	2,690,370	–	5·14	13,834,900
1918	502,069	9·50	4,787,500	–	6·15	29,439,100
1919	511,769	9·75	4,942,760	–	6·92	34,179,500
1920	588,977	9·60	5,641,750	–	7·75	43,701,000
1921	585,395	10·75	6,361,600	–	7·05	44,880,800
1922	654,624	9·00	5,879,000	–	4·97	29,197,600
Averages.....1917-21	510,946	9·55	4,884,796	–	6·80	33,207,060
Sugar beets.....1917	14,000	8·40	117,600	–	6·75	793,800
1918	18,000	10·00	180,000	–	10·25	1,845,000
1919	24,500	9·80	240,000	–	10·86	2,606,000
1920	36,288	11·37	412,400	–	12·80	5,278,700
1921	28,367	9·45	268,000	–	6 50	1,742,000
1922	20,725	9·20	190,400	–	7·88	1,500,000
Averages.....1917-21	24,231	10·00	243,600	–	10·07	2,453,100
		bush.	bush.		per bush.	
Prince Edward Island—						
Spring wheat.....1917	36,000	14·50	552,000	57·63	2·09	1,091,000
1918	30,252	20·00	606,000	59·93	2·22	1,344,000
1919	35,595	17·00	624,600	59·00	2·73	1,705,200
1920	37,601	12·00	452,900	55·56	2·00	906,000
1921	34,106	16·75	573,000	59·89	1·00	573,000
1922	32,531	21·25	688,800	59·79	1·25	863,000
Averages.....1917-21	34,731	16·00	555,700	58·40	2·02	1,123,840
Oats.....1917	201,000	32·25	6,482,300	34·80	0·80	5,185,800
1918	169,729	34·50	5,839,000	36·42	0·77	4,535,000
1919	174,937	34·00	6,038,000	36·00	0·85	5,132,000
1920	183,452	27·75	5,095,000	32·15	0·70	3,567,000
1921	189,453	27·00	5,118,000	36·04	0·50	2,560,000
1922	182,599	35·75	6,533,000	32·00	0·41	2,662,000
Averages.....1917-21	183,714	31·00	5,714,460	35·08	0·73	4,195,960

1.—Area, Yield, Quality and Value of Principal Field Crops in Canada, 1917-22 and Five-Year Average, 1917-21—con.

Field crops.	Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per bushel.	Total value.
	acres.	bush.	bush.	lb.	$	$
Prince Edward Island—con.						
Barley.....1917	3,500	28·50	99,750	46·45	1·22	121,700
1918	5,672	28·50	162,000	49·31	1·25	203,400
1919	5,636	29·00	164,000	50·00	1·40	229,700
1920	5,046	24·50	123,000	47·47	1·27	156,200
1921	6,334	23·25	147,400	48·41	0·75	110,550
1922	4,716	29·00	136,300	48·47	1·01	137,700
Averages.....1917-21	5,238	26·50	139,230	48·33	1·18	164,310
Peas.....1917	60	14·00	840	60·60	2·86	2,400
1918	460	16·00	7,300	60·66	2·90	21,200
1919	490	16·00	8,100	60·00	3·25	26,300
1920	164	16·50	2,700	60·00	3·00	8,100
1921	212	23·50	5,000	55·00	1·25	6,300
1922	277	21·00	5,800	59·00	2·35	13,600
Averages.....1917-21	277	17·25	4,788	59·25	2·68	12,860
Buckwheat.....1917	2,500	29·00	72,500	47·80	1·32	95,700
1918	5,592	21·75	122,000	48·77	1·44	175,500
1919	4,094	20·75	87,800	48·80	1·50	132,000
1920	4,035	23·50	95,000	46·67	1·30	123,500
1921	2,932	24·75	72,800	46·15	0·75	54,600
1922	2,723	27·25	74,200	47·00	0·82	60,800
Averages.....1917-21	3,830	23·50	90,020	47·64	1·29	116,260
Mixed grains.....1917	7,800	38·25	298,400	42·61	0·98	292,400
1918	13,475	44·50	600,000	45·00	1·04	623,400
1919	18,900	44·00	843,400	44·00	1·22	1,039,400
1920	16,504	33·75	556,600	41·44	0·85	473,000
1921	16,770	29·25	491,900	41·47	0·80	393,520
1922	17,326	37·75	652,200	41·00	0·63	407,700
Averages.....1917-21	14,690	38·00	558,060	42·90	1·01	564,344
		centals.	centals.		per cental.	
Potatoes.....1917	35,000	105·00	3,675,000	–	1·25	4,594,000
1918	31,543	102·00	3,217,380	–	1·04	3,378,000
1919	36,234	75·00	2,717,400	–	1·41	3,850,000
1920	36,322	102·00	3,704,820	–	1·11	4,013,600
1921	36,921	96·95	3,579,480	–	0·75	2,684,600
1922	35,553	74·75	2,657,700	–	0·50	1,329,000
Averages.....1917-21	35,204	95·85	3,374,816	–	1·10	3,704,040
Turnips, mangolds, etc..1917	8,100	252·70	2,047,000	–	0·62	1,269,000
1918	8,246	260·25	2,146,000	–	0·58	1,244 700
1919	12,337	259·20	3,198,000	–	0·51	1,638,800
1920	9,397	241·00	2,264,500	–	0·60	1,359,000
1921	9,961	285·20	2,841,100	–	0·47	1,336,400
1922	8,115	285·00	2,313,000	–	0·36	833,000
Averages.....1917-21	9,608	260·10	2,499,320	–	0·55	1,369,580
		tons.	tons.		per ton.	
Hay and clover.....1917	197,000	1·55	305,400	–	12·67	3,869,000
1918	222,691	1·50	334,000	–	14·17	4,732,800
1919	237,883	1·80	428,000	–	20·00	8,564,000
1920	243,394	1·25	304,200	–	26·00	7,909,000
1921	255,010	0·80	215,200	–	30·00	6,455,200
1922	258,559	1·45	379,400	–	12·00	4,553,000
Averages.....1917-21	231,196	1·35	317,360	–	19·87	6,306,000
Fodder corn.....1917	250	7·00	1,800	–	5·00	9,000
1918	420	5·25	2,200	–	9·00	19,800
1919	522	12·00	6,260	–	8·00	50,000
1920	190	8·00	1,500	–	10·00	15,000
1921	485	10·00	4,800	–	6·00	28,800
1922	670	7·50	5,000	–	6·00	30,000
Averages.....1917-21	373	8·85	3,312	–	7·40	24,520
Nova Scotia—					per bush.	
		bush.	bush.			
Spring wheat.....1917	16,200	15·75	255,150	57·93	2·34	597,000
1918	32,737	22·25	728,000	59·43	2·36	1,718,000
1919	28,931	19·50	564,000	58·32	2·81	1,585,000
1920	26,116	19·50	511,900	59·00	2·15	1,098,000
1921	16,294	15·50	252,000	58·77	1·42	357,000
1922	14,493	20·25	293,600	59·08	1·60	470,000
Averages.....1917-21	24,055	19·25	462,210	58·69	2·31	1,071,000

1.—Area, Yield, Quality and Value of Principal Field Crops in Canada, 1917-22 and Five-Year Average, 1917-1921—con.

Field crops.	Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per bushel.	Total value.
	acres.	bush.	bush.	lb.	$	$
Nova Scotia—con.						
Oats.....1917	123,000	29·25	3,597,800	32·28	0·92	3,310,000
1918	145,086	37·25	5,403,000	34·69	1·06	5,727,000
1919	158,838	36·00	5,718,000	34·54	1·14	6,519,000
1920	152,976	30·25	4,636,800	33·45	1·00	4,614,000
1921	136,904	28·75	3,927,400	34·15	0·74	2,897,300
1922	136,862	33·25	4,549,000	34·50	0·66	2,988,000
Averages.....1917-21	143,351	32·50	4,656,600	33·82	0·99	4,613,460
Barley.....1917	4,800	24·75	118,800	46·54	1·34	159,200
1918	11,571	30·00	347,000	48·19	1·62	562,000
1919	13,894	31·25	434,000	46·97	1·77	768,000
1920	11,487	26·00	298,400	46·76	1·51	452,000
1921	8,686	23·00	200,100	47·58	1·16	231,600
1922	7,155	27·25	194,000	47·96	0·98	191,000
Averages.....1917-21	10,087	27·75	279,660	47·21	1·55	434,560
Rye.....1917	300	15·00	4,500	54·50	1·67	7,500
1918	531	14·50	7,700	55·67	1·85	14,200
1919	1,046	29·50	31,000	53·00	1·55	48,000
1920	470	15·00	7,100	56·00	1·50	10,650
1921	369	14·25	5,260	52·50	1·50	7,900
1922	243	20·25	4,900	56·00	1·38	6,800
Averages.....1917-21	543	20·50	11,112	54·33	1·59	17,650
Peas.....1917	170	14·25	2,400	58·50	4·44	10,700
1918	1,753	18·75	33,000	59·50	3·20	106,000
1919	1,896	20·00	38,000	58·50	3·84	146,000
1920	1,046	20·50	21,400	56·81	3·67	78,500
1921	775	16·75	12,981	58·20	3·36	43,600
1922	639	22·00	14,000	57·00	3·00	42,000
Averages.....1917-21	1,128	19·00	21,556	58·30	3·57	76,960
Beans.....1917	1,000	17·75	17,750	59·00	7·95	141,100
1918	8,829	16·25	143,000	59·14	7·34	1,050,000
1919	6,859	12·75	87,000	57·56	6·37	554,000
1920	4,617	18·50	85,900	58·50	6·00	515,400
1921	2,982	19·25	57,800	59·86	4·36	251,800
1922	3,108	19·00	59,000	58·83	4·00	236,000
Averages.....1917-21	4,857	16·00	78,290	58·81	6·42	502,460
Buckwheat.....1917	10,900	21·00	228,900	46·56	1·14	261,000
1918	19,342	23·00	445,000	47·10	1·35	601,000
1919	17,384	25·25	439,000	47·23	1·55	680,000
1920	13,106	22·25	291,400	47·27	1·36	397,000
1921	9,404	20·50	192,500	48·07	1·06	203,500
1922	8,657	24·00	208,000	46·94	0·98	189,000
Averages.....1917-21	14,027	22·75	319,360	47·25	1·34	428,500
Mixed grains.....1917	4,000	24·00	96,000	39·91	1·24	119,000
1918	5,407	36·00	195,000	42·24	1·30	254,000
1919	8,628	37·50	218,000	46·77	1·53	334,000
1920	6,171	32·50	200,600	39·20	1·32	265,000
1921	4,713	30·00	141,100	44·46	0·97	136,700
1922	4,495	30·50	137,500	45·76	0·85	117,000
Averages.....1917-21	5,784	29·50	170,146	42·52	1·30	221,740
		centals.	centals.		per cental.	
Potatoes.....1917	41,000	104·95	4,303,800	–	1·53	6,599,000
1918	51,250	114·45	5,865,600	–	1·55	9,092,000
1919	62,060	96·60	5,995,200	–	1·81	10,891,000
1920	50,092	122·25	6,125,400	–	1·63	9,966,000
1921	39,168	98·25	3,848,400	–	1·58	6,093,000
1922	38,051	97·10	3,695,400	–	0·97	3,572,000
Averages.....1917-21	48,714	107·30	5,227,680	–	1·63	8,528,200
Turnips, mangolds, etc..1917	9,100	175·45	1,596,500	–	0·94	1,501,000
1918	23,823	195·60	4,660,350	–	1·15	5,406,000
1919	30,291	268·85	8,144,500	–	1·20	9,773,000
1920	19,946	215·85	4,305,500	–	1·24	5,368,000
1921	15,436	247·50	3,820,500	–	0·40	1,528,000
1922	16,162	215·60	3,484,500	–	0·60	2,090,000
Averages.....1917-21	19,719	228·50	4,505,470	–	1·04	4,715,200

1.—Area, Yield, Quality and Value of Principal Field Crops in Canada, 1917-22 and Five-Year Average, 1917-1921—con.

Field crops.		Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per ton.	Total value.
		acres.	tons.	tons.	lb.	$	$
Nova Scotia—con.							
Hay and clover	1917	542,000	1·65	894,300	–	11·83	10,580,000
	1918	605,464	1·45	878,000	–	20·00	17,560,000
	1919	678,357	2·10	1,425,000	–	22·34	31,835,000
	1920	632,069	1·50	948,000	–	35·00	24,966,000
	1921	571,661	1·35	771,700	–	23·00	17,749,000
	1922	558,052	1·55	871,000	–	16·25	14,154,000
Averages	1917-21	605,910	1·60	983,400	–	20·88	20,538,000
Alfalfa	1917	30	3·50	100	–	15·00	1,500
Fodder corn	1917	480	9·20	4,400	–	6·00	26,400
	1918	4,644	9·50	44,000	–	9·00	396,000
	1919	2,960	9·50	28,000	–	8·00	224,000
	1920	1,451	8·00	11,600	–	10·00	116,000
	1921	1,466	6·50	9,500	–	6·00	57,000
	1922	1,179	7·55	8,900	–	9·50	84,600
Averages	1917-21	2,200	8·85	19,500	–	8·40	163,880
New Brunswick—			bush.	bush.		per bush.	
Spring wheat	1917	16,000	12·00	192,000	58·43	2·25	432,000
	1918	49,453	19·00	940,250	59·68	2·32	2,183,700
	1919	35,641	17·50	623,000	59·61	2·80	1,744,400
	1920	29,485	15·75	464,400	58·25	2·11	979,900
	1921	28,028	15·25	427,000	59·20	1·50	641,000
	1922	22,629	17·50	396,000	59·29	1·73	685,000
Averages	1917-21	31,721	16·75	529,330	59·03	2·26	1,196,200
Oats	1917	190,000	22·50	4,275,000	33·33	0·94	4,018,500
	1918	224,442	31·50	7,051,400	35·32	0·97	6,877,400
	1919	305,484	30·25	9,261,000	35·10	0·98	9,086,000
	1920	309,071	29·50	9,117,600	34·93	0·60	5,470,600
	1921	284,728	25·00	7,118,000	31·50	0·65	4,627,000
	1922	313,937	30·75	9,666,000	35·85	0·58	5,606,000
Averages	1917-21	262,745	28·00	7,364,600	34·03	0·82	6,015,900
Barley	1917	1,800	22·00	39,600	42·84	1·36	53,900
	1918	6,601	24·75	163,140	47·81	1·55	253,279
	1919	10,662	26·75	285,000	47·48	1·35	385,000
	1920	8,177	23·75	194,200	46·50	1·41	273,800
	1921	8,898	17·00	151,000	47·64	1·11	168,000
	1922	7,551	25·00	188,000	48·28	0·94	177,000
Averages	1917-21	7,228	23·00	166,588	46·47	1·36	226,794
Rye	1918	308	16·25	5,000	–	1·85	9,000
	1919	353	20·00	7,000	56·00	2·00	14,000
	1920	254	14·00	3,600	–	1·80	6,500
	1921	479	17·50	8,400	–	1·00	8,400
	1922	580	19·00	11,000	57·00	1·00	11,000
Averages	1918-21	348	17·25	6,000	–	1·57	9,475
Peas	1917	400	15·00	6,000	60·45	2·83	17,000
	1918	4,077	14·75	60,100	59·37	3·68	221,200
	1919	4,697	14·75	69,000	59·85	3·03	209,000
	1920	2,844	15·00	42,700	60·50	2·35	100,300
	1921	2,124	12·75	27,000	59·75	2·25	61,000
	1922	2,227	14·25	32,000	60·73	2·81	90,000
Averages	1917-21	2,828	14·50	40,960	59·98	2·97	121,700
Beans	1917	300	19·50	5,850	59·00	8·75	51,200
	1918	5,491	15·50	85,580	59·39	8·05	689,400
	1919	6,409	16·50	106,000	58·58	5·25	556,000
	1920	4,254	16·25	69,100	60·00	3·39	234,200
	1921	2,292	12·75	29,000	59·50	4·00	116,000
	1922	3,559	18·00	64,000	59·67	3·35	214,000
Averages	1917-21	3,749	15·75	59,106	59·29	5·57	329,360
Buckwheat	1917	57,000	19·50	1,111,500	45·48	1·13	1,256,000
	1918	72,483	20·75	1,499,500	47·38	1·65	2,477,000
	1919	74,642	25·00	1,871,000	47·74	1·36	2,547,000
	1920	66,366	22·75	1,509,800	46·69	1·45	2,189,200
	1921	49,812	22·25	1,108,000	47·84	1·00	1,108,000
	1922	54,605	25·00	1,393,000	48·50	0·97	1,351,000
Averages	1917-21	64,061	22·25	1,419,960	47·03	1·35	1,915,440

1.—Area, Yield, Quality and Value of Principal Field Crops in Canada, 1917-22 and Five-Year Average, 1917-21—con.

Field crops.		Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per bushel.	Total value.
New Brunswick—con.		acres.	bush.	bush.	lb.	$	$
Mixed grains	1917	840	19·50	16,380	43·29	1·10	18,000
	1918	4,292	32·50	139,900	42·97	1·25	175,200
	1919	5,297	33·75	179,000	43·83	1·23	220.000
	1920	3,395	29·75	101,000	41·00	1·17	118,200
	1921	4,089	23·50	96,000	41·67	0·88	84,000
	1922	3,632	31·00	113,000	49·11	0·84	95,000
Averages	1917–21	3,583	29·75	106,456	42·55	1·16	123,080
			centals.	centals.		per cental.	
Potatoes	1917	46,000	89·90	4,134,600	–	1·88	7,787,000
	1918	57,272	95·10	5,446,560	–	1·67	9,077,600
	1919	75,573	86·65	6,474,120	–	1·62	10,466,000
	1920	78,335	118·80	9,306,180	–	1·17	10,857,200
	1921	74,875	129·75	9,715,200	–	1·50	14,573,000
	1922	74,811	98·50	7,369,000	–	0·83	6,116,000
Averages	1917–21	66,411	105·65	7,015,332	–	1·50	10,552,160
Turnips, mangolds, etc.	1917	7,700	150·25	1,157,000	–	1·22	1,412,000
	1918	18,507	175·00	3,238,750	–	1·16	3,757,000
	1919	24,279	183·25	4,449,400	–	1·15	5,155,000
	1920	20,030	176·50	3,535,300	–	0·40	1,414,100
	1921	17,745	174·75	3,101,000	–	0·34	1,054,000
	1922	16,202	198·65	3,218,000	–	0·78	2,510,000
Averages	1917–21	17,652	175·40	3,096,290	–	0·83	2,558,420
			tons.	tons.		per ton.	
Hay and clover	1917	568,000	1·60	909,000	–	10·29	9,354,000
	1918	740,637	1·50	1,111,000	–	15·30	16,998,300
	1919	786,175	1·40	1,111,000	–	20·26	22,512,000
	1920	726,380	1·20	871,700	–	27·87	24,294,300
	1921	694,497	0·90	625,000	–	25·00	15,625,000
	1922	700,581	1·50	1,051,000	–	14·00	14,714,000
Averages	1917–21	703,138	1·30	925,540	–	19·18	17,756,720
Alfalfa	1918	1,178	1·50	1,800	–	9·00	16,200
Fodder corn	1917	85	9·00	770	–	6·00	4,600
	1918	3,459	4·50	15,600	–	10·00	156,000
	1919	5,966	5·00	30,000	–	8·00	240.000
	1920	5,243	8·00	41,900	–	10·00	419,000
	1921	3,738	7·00	26,000	–	10·00	260,000
	1922	5,503	7·50	41,000	–	10·00	410,000
Averages	1917–21	3,686	6·20	22,854	–	9·45	215,920
			bush.	bush.		per bush.	
Quebec—							
Spring wheat	1917	277,400	14·00	3,883,600	57·94	2·46	9,553,700
	1918	365,670	17·25	6,308,000	58·82	2·28	14,382,000
	1919	251,089	16·75	4,206,000	59·12	2·86	12,029,000
	1920	222,045	17·00	3,775,000	59·45	2·24	8,456,000
	1921	180,616	15·25	2,754,000	58·19	1·59	4,379,000
	1922	145,047	15·75	2,286,000	59·39	1·53	3,491,000
Averages	1917–21	259,364	16·25	4,185,320	58·70	2·33	9,759,940
Oats	1917	1,492,700	21·75	32,466,200	34·34	0·92	29,868,900
	1918	1,932,720	27·25	52,667,000	35·98	1·00	52,667,000
	1919	2,141,107	26·75	57,275,000	35·47	1·06	60,712,000
	1920	2,205,908	30·25	66,729,000	36·51	0·88	58,722,000
	1921	2,366,810	21·25	50,591,000	35·24	0·60	30,355,000
	1922	2,252,016	27·75	62,281,000	36·25	0·62	38,614,000
Averages	1917–21	2,027,849	25·50	51,945,640	35·51	0·89	46,464,980
Barley	1917	165,600	18·50	3,063,600	48·14	1·58	4,840,500
	1918	189,202	24·00	4,551,000	48·16	1·62	7,373,000
	1919	234,892	22·75	5,344,000	47·63	1·64	8,764,000
	1920	194,444	25·25	4,910,000	47·83	1·41	6,923,000
	1921	191,673	21·25	4,073,000	46·19	1·00	4,073,000
	1922	155,578	22·75	3,549,000	46·80	0·92	3,277,000
Averages	1917–21	195,162	22·50	4,388,320	47·59	1·46	6,394,700
Rye	1917	22,450	16·75	376,000	53·36	1·78	669,300
	1918	29,063	16·25	472,000	54·78	2·10	991,000
	1919	33,481	17·25	578,000	55·87	2·00	1,156,000
	1920	28,462	18·75	534,000	55·70	1·88	1,004,000
	1921	24,940	17·25	430,000	53·88	1·25	538,000
	1922	18,736	15·50	288,500	53·10	1·26	364,400
Averages	1917–21	27,679	17·25	478,000	54·72	1·82	871,660

1.—Area, Yield, Quality and Value of Principal Field Crops in Canada, 1917-22 and Five-Year Average, 1917-21—con.

Field crops.	Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per bushel.	Total value.
	acres.	bush.	bush.	lb.	$	$
Quebec—con.						
Peas.....1917	66,457	12·00	797,500	59·75	4·51	3,596,700
1918	107,386	15·50	1,664,000	60·26	4·14	6,889,000
1919	81,642	15·00	1,225,000	60·14	3·62	4,435,000
1920	60,870	17·00	1,035,000	60·74	3·36	3,478,000
1921	65,259	14·75	963,000	59·43	2·50	2,408,000
1922	64,096	14·25	914,000	60·03	2·74	2,506,000
Averages.....1917-21	76,323	15·00	1,136,900	60·06	3·66	4,161,340
Beans.....1917	55,157	15·00	827,400	59·90	7·77	6,428,900
1918	109,803	17·00	1,867,000	59·45	5·72	10,679,000
1919	43,202	19·75	853,000	59·81	4·52	3,856,000
1920	35,835	18·00	645,000	60·15	4·08	2,632,000
1921	28,272	18·75	530,000	59·16	3·18	1,685,000
1922	29,812	17·00	505,500	58·77	3·15	1,592,000
Averages.....1917-21	54,454	17·25	944,480	59·69	5·35	5,056,180
Buckwheat.....1917	163,577	16·50	2,699,000	46·55	1·73	4,669,300
1918	227,018	20·75	4,711,000	48·20	1·77	8,338,000
1919	170,043	24·00	4,081,000	47·72	1·70	6,938,000
1920	151,765	25·75	3,908,000	48·19	1·38	5,393,000
1921	150,666	23·25	3,503,000	47·08	1·00	3,503,000
1922	167,185	22·50	3,760,000	46·20	0·94	3,547,000
Averages.....1917-21	172,614	22·00	3,780,400	47·55	1·53	5,768,260
Mixed grains.....1917	122,819	21·25	2,609,900	44·50	1·33	3,471,200
1918	194,288	27·00	5,246,000	45·49	1·46	7,659,000
1919	157,637	27·00	4,256,000	44·54	1·50	6,384,000
1920	143,423	29·25	4,195,000	46·10	1·26	5,286,000
1921	168,245	24·00	4,038,000	43·31	0·85	3,432,000
1922	139,697	26·75	3,744,000	43·32	0·79	2,957,000
Averages.....1917-21	157,282	25·75	4,068,980	44·79	1·29	5,246,440
Flaxseed.....1917	5,700	8·25	47,000	53·21	3·37	158,400
1918	7,357	11·25	83,000	54·66	3·74	310.000
1919	11,384	9·75	111,000	53·46	3·91	434,000
1920	16,035	11·50	184,000	55·79	3·57	657,000
1921	8,641	11·50	99,400	52·78	3·56	354,000
1922	5,880	10·00	58,200	52·46	2·75	160,200
Averages.....1917-21	9,823	10·75	104,880	53·98	3·65	382,680
Corn for husking.....1917	74,339	24·25	1,802,700	56·89	2·25	4,056,000
1918	54,690	21·75	1,190,000	56·41	2·10	2,518,000
1919	43,603	41·00	1,788,000	–	1·84	3,290,000
1920	47,741	29·75	1,420,000	55·97	1·59	2,258,000
1921	46,182	29·50	1,362,000	55·28	1·15	1,567,000
1922	53,379	28·00	1,492,000	53·72	1·28	1,911,000
Averages.....1917-21	53,311	28·25	1,512,540	56·14	1·81	2,737,800
		centals.	centals.		per cental.	
Potatoes.....1917	226,917	48·00	10,894,800	–	2·30	25,058,000
1918	264,871	88·20	23,361,600	–	1·63	38,157,000
1919	315,590	108·90	34,368,000	–	1·42	48,688,000
1920	310,692	111·30	34,579,800	–	1·67	57,633,000
1921	222,084	97·50	21,653,400	–	1·33	28,871,000
1922	206,234	82·35	16,983,000	–	1·08	18,342,000
Averages.....1917-21	268,031	93·16	24,971,520	–	1·59	39,681,400
Turnips, mangolds, etc..1917	70,192	112·25	7,879,500	–	1·18	9,298,000
1918	95,526	147·75	14,114,000	–	1·06	14,960,800
1919	87,496	158·75	13,890,000	–	1·06	14,723,000
1920	83,613	164·65	13,765,000	–	1·00	13,765,000
1921	53,084	159·50	8,467,000	–	0·80	6,774,000
1922	48,812	158·15	7,719,000	–	0·86	6,638,000
Averages.....1917-21	77,982	149·05	11,623,100	–	1·02	11,904,160
		tons.	tons.		per ton.	
Hay and clover.....1917	2,961,983	1·71	5,065,000	–	9·58	48,523,000
1918	4,533,266	1·50	6,799,900	–	15·75	107,098,400
1919	4,299,360	1·50	6,449,000	–	20·54	132,462,000
1920	4,290,121	1·25	5,363,000	–	29·00	155,527,000
1921	4,426,671	0·95	4,205,000	–	29·00	121,945,000
1922	3,998,036	1·35	5,397,000	–	14·00	75,558,000
Averages.....1917-21	4,102,280	1·35	5,576,380	–	20·28	113,111,080

1.—Area, Yield, Quality and Value of Principal Field Crops in Canada, 1917-22 and Five-Year Average, 1917-1921—con.

Field crops.		Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per ton.	Total value.
		acres.	tons.	tons.	lb.	$	$
Quebec—con.							
Alfalfa	1917	3,818	2·26	8,600	–	8·37	72,000
	1918	4,144	2·25	9,300	–	11·70	109,000
	1919	28,488	2·35	67,000	–	14·22	953,000
	1920	28,200	2·40	68,000	–	21·00	1,428,000
	1921	29,300	2·20	64,500	–	25·00	1,613,000
	1922	30,200	1·50	45,300	–	11·50	521,000
Averages	1917-21	18,790	2·30	43,480	–	19·20	835,000
Fodder corn	1917	69,030	8·50	586,800	–	5·00	2,934,000
	1918	86,358	7·25	626,100	–	7·42	4,645,700
	1919	74,007	8·25	611,000	–	8·41	5,139,000
	1920	86,833	8·00	695,000	–	10·20	7,089,000
	1921	89,546	9·00	806,000	–	9·50	7,657,000
	1922	120,592	7·25	874,000	–	6·50	5,681,000
Averages	1917-21	81,155	8·20	664,980	–	8·26	5,492,940
Ontario—			bush.	bush.		per bush.	
Fall wheat	1917	656,500	21·50	14,114,800	59·38	2·09	29,499,900
	1918	362,616	19·50	7,054,800	59·80	2·09	14,763,000
	1919	619,494	24·30	15,052,000	61·33	2·45	36,877,000
	1920	762,371	24·30	18,492,000	60·20	1·89	34,890,500
	1921	621,420	22·00	13,667,900	58·55	1·05	14,362,000
	1922	813,935	21·90	17,793,000	59·89	1·01	18,031,000
Averages	1917-21	604,480	22·50	13,676,300	59·85	1·91	26,078,480
Spring wheat	1917	113,000	19·50	2,203,500	59·32	2·08	4,583,300
	1918	351,423	23·25	8,186,200	59·84	2·03	16,638,000
	1919	361,150	15·60	5,646,500	58·27	2·46	13,890,400
	1920	267,367	16·80	4,480,500	57·92	1·81	8,112,600
	1921	152,904	12·50	1,907,500	56·85	1·06	2,014,000
	1922	124,206	16·90	2,100,000	58·81	1·00	2,100,000
Averages	1917-21	249,169	18·00	4,484,840	58·44	2·02	9,047,660
All wheat	1917	769,500	21·25	16,318,300	59·36	2·09	34,083,200
	1918	714,039	21·25	15,241,000	60·54	2·06	31,401,000
	1919	980,644	21·20	20,698,500	59·76	2·45	50,767,400
	1920	1,029,738	22·30	22,972,500	59·10	1·87	43,003,100
	1921	774,324	20·10	15,575,400	57·88	1·05	16,376,000
	1922	938,141	21·25	19,893,000	59·44	1·01	20,131,000
Averages	1917-21	853,649	21·25	18,161,140	59·33	1·93	35,126,140
Oats	1917	2,687,000	36·50	98,075,500	34·11	0·72	70,614,400
	1918	2,924,468	45·00	131,752,600	35·58	0·78	102,212,000
	1919	2,674,341	29·30	78,388,000	32·76	0·91	71,378,000
	1920	2,880,053	44·90	129,171,300	35·95	0·58	74,670,300
	1921	3,094,958	23·40	72,575,000	28·69	0·47	33,774,000
	1922	3,034,090	38·20	116,034,000	34·48	0·40	46,404,000
Averages	1917-21	2,852,164	35·75	101.992,480	33·42	0·69	70,529,740
Barley	1917	361,000	31·00	11,191,000	47·20	1·16	12,981,600
	1918	660,404	36·75	24,247,700	48·13	1·06	25,809,000
	1919	569,183	23·10	13,134,000	45·81	1·32	17,215,000
	1920	484,328	34·40	16,660,350	48·70	0·94	15,653,200
	1921	462,176	22·00	10,149,000	44·42	0·63	6,390,000
	1922	433,922	32·20	13,972,000	47·73	0·57	7,932,000
Averages	1917-21	507,418	29·75	15,076,410	46·85	1·03	15,609,760
Rye	1917	68,000	17·75	1,207,000	55·69	1·64	1,979,500
	1918	112,726	16·00	1,813,000	55·65	1·55	2,818,400
	1919	140,672	15·80	2,219,000	54·97	1·48	3,279,000
	1920	133,090	17·70	2,349,900	55·30	1·35	3,176,200
	1921	122,868	14·50	1,775,600	54·29	0·88	1,571,000
	1922	152,709	16·40	2,500,000	56·13	0·76	1,900,000
Averages	1917-21	115,351	16·25	1,872,900	55·18	1·29	2,424,820
Peas	1917	126,000	16·75	2,110,500	59·88	3·21	6,774,700
	1918	113,862	21·00	2,381,000	59·85	2·24	5,338,700
	1919	127,253	14·30	1,816,500	59·97	2·31	4,180,000
	1920	109,187	20·20	2,209,500	60·43	2·00	4,419,000
	1921	105,964	13·60	1,441,100	59·50	1·50	2,166,000
	1922	105,544	19·70	2,077,000	59·81	1·40	2,907,000
Averages	1917-21	116,453	17·00	1,991,720	59·93	2·30	4,575,680

1.—Area, Yield, Quality and Value of Principal Field Crops in Canada, 1917-22 and Five-Year Average, 1917-1921—con.

Field crops.	Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per bushel.	Total value.
	acres.	bush.	bush.	lb.	$	$
Ontario—con.						
Beans.....1917	36,000	11·75	423,000	59·42	6·79	2,872,200
1918	100,082	13·75	1,387,800	59·27	4·66	6,464,500
1919	22,920	12·60	288,500	61·74	3·79	1,039,000
1920	22,744	16·70	380,500	59·70	3·10	1,181,100
1921	26,509	16·10	427,500	59·27	2·35	1,006,000
1922	39,999	15·60	623,000	59·13	2·48	1,545,000
Averages.....1917-21	41,651	14·00	581,460	59·88	4·32	2,512,560
Buckwheat.....1917	162,000	18·75	3,037,500	46·69	1·37	4,161,400
1918	223,662	20·50	4,598,000	46·96	1·40	6,426,600
1919	178,569	22·80	4,072,000	46·71	1·36	5,534,000
1920	143,204	22·30	3,190,500	48·10	1·07	3,409,800
1921	147,944	22·70	3,353,800	47·38	0·72	2,416,000
1922	197,812	21·60	4,266,000	47·62	0·70	2,993,000
Averages.....1917-21	171,076	21·25	3,650,360	47·17	1·20	4,389,560
Mixed grains.....1917	295,000	37·75	11,136,300	44·99	1·12	12,472,700
1918	619,389	44·25	27,462,400	46·01	1·09	29,823,900
1919	628,761	31·40	19,735,300	44·71	1·35	26,672,000
1920	581,689	44·20	25,712,400	44·50	0·81	20,709,000
1921	618,289	26·20	16,188,500	39·95	0·58	9,373,000
1922	552,399	38·50	21,270,000	44·38	0·58	12,255,000
Averages.....1917-21	548,626	36·50	20,046,980	44·03	0·99	19,810,120
Flaxseed.....1917	4,000	13·00	52,000	55·00	3·70	192,400
1918	15,925	12·25	196,200	56·72	3·41	670,000
1919	13,717	9·40	129,500	59·86	3·48	450,500
1920	21,053	10·70	224,900	56·50	2·43	545,500
1921	7,534	8·90	66,700	52·53	1·58	105,400
1922	4,556	10·70	48,600	49·75	0·98	47,700
Averages.....1917-21	12,446	10·75	133,860	56·12	2·93	392,760
Corn for husking.....1917	160,000	37·25	5,960,000	54·58	1·72	10,251,200
1918	195,310	66·75	13,015,200	58·23	1·72	22,384,800
1919	221,004	68·60	15,152,500	–	1·24	18,790,000
1920	243,909	53·00	12,914,800	56·60	1·11	14,335,400
1921	250,684	54·00	13,542,000	55·86	0·72	10,750,000
1922	265,018	46·50	12,306,000	56·07	0·78	9,598,700
Averages.....1917-21	214,181	56·50	12,116,900	56·32	1·26	15,302,280
		centals.	centals.		per cental.	
Potatoes.....1917	142,000	80·20	11,388,600	–	1·67	18,981,000
1918	166,203	69·95	11,625,600	–	2·10	24,413,000
1919	157,286	57·75	9,087,000	–	2·29	20,820,000
1920	157,509	92·00	14,377,020	–	1·61	23,131,200
1921	161,096	56·30	9,240,000	–	1·67	15,400,000
1922	172,858	70·65	12,210,000	–	0·90	10,989,000
Averages.....1917-21	157,419	70·80	11,143,644	–	1·84	20,549,040
Turnips, mangolds, etc..1917	94,000	170·45	16,023,500	–	0·70	11,216,000
1918	141,001	230·15	32,448,000	–	0·64	20,767,000
1919	123,029	173·75	21,378,000	–	0·66	14,027,000
1920	119,744	242·15	28,994,900	–	0·57	16,518,000
1921	104,157	175·65	18,293,000	–	0·70	12,805,000
1922	105,033	222·60	23,318,000	–	0·38	8,885,000
Averages.....1917-21	116,386	201·30	23,427,480	–	0·64	15,066,600
		tons.	tons.		per ton.	
Hay and clover.....1917	2,998,000	1·70	5,097,000	–	10·26	52,295,000
1918	3,470,036	1·32	4,956,900	–	16·50	75,848,000
1919	3,508,266	1·59	5,589,000	–	20·61	115,161,000
1920	3,533,740	1·26	4,459,000	–	24·30	108,356,000
1921	3,551,655	1·11	3,954,200	–	21·25	84,027,000
1922	3,575,662	1·56	5,568,000	–	12·40	69,049,000
Averages.....1917-21	3,412,340	1·40	4,739,220	–	18·38	87,137,400
Alfalfa.....1917	52,000	2·74	142,500	–	10·08	1,436,000
1918	144,010	2·28	329,000	–	15·78	5,191,000
1919	146,790	2·14	314,400	–	20·20	6,351,000
1920	162,820	2·45	399,580	–	23·49	9,384,400
1921	177,205	2·58	456,400	–	20·00	9,128,000
1922	221,326	2·84	629,100	–	11·55	7,266,000
Averages.....1917-21	136,565	2·40	328,376	–	19·18	6,298,080

1.—Area, Yield, Quality and Value of Principal Field Crops in Canada, 1917-22 and Five-Year Average, 1917-21—con.

Field crops.	Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per ton.	Total value.
	acres.	tons.	tons.	lb.	$	$
Ontario—con.						
Fodder corn.....1917	265,000	7·54	1,998,000	–	5·00	9,990,000
1918	380,946	10·35	3,944,300	–	5·73	22,601,000
1919	399,549	10·05	4,014,000	–	6·30	25,304,000
1920	449,176	10·39	4,668,050	–	6·85	31,976,000
1921	438,343	11·44	5,015,100	–	6·50	32,598,000
1922	438,819	10·06	4,413,000	–	4·35	19,197,000
Averages.....1917-21	386,603	10·25	3,927,890	–	6·24	24,493,800
Sugar beets.....1917	14,000	8·40	117,600	–	6·75	793,800
1918	18,000	10·00	180,000	–	10·25	1,845,000
1919	24,500	9·80	240,000	–	10·86	2,606,000
1920	36,288	11·37	412,400	–	12·80	5,278,700
1921	28,367	9·45	368,000	–	6·50	1,742,000
1922	20,725	9·20	190,400	–	7·88	1,500,000
Averages.....1917-21	24,231	10·05	243,600	–	10·07	2,453,100
Manitoba—		bush.	bush.		per bush.	
Fall wheat.....1917	3,860	22·25	85,900	62·33	2·20	189,000
1918	2,734	18·00	49,000	–	2·06	101,000
Averages.....1917-18	3,297	20·50	67,450	–	2·15	145,000
Spring wheat.....1917	2,445,000	16·75	40,953,800	60·82	2·05	83,955,300
1918	2,980,968	16·25	48,142,100	60·16	2·06	99,173,000
1919	2,880,301	14·25	40,975,300	57·22	2·40	98,341,000
1920	2,705,622	13·90	37,542,000	59·56	1·83	68,769,000
1921	3,501,217	11·15	39,054,000	56·62	0·91	35,539,000
1922	3,125,556	19·25	60,051,000	60·52	0·83	49,842,000
Averages.....1917-21	2,902,621	14·25	41,333,440	58·87	1·87	77,155,460
All wheat.....1917	2,448,860	16·75	41,039,700	60·86	2·05	84,144,300
1918	2,983,702	16·35	48,191,100	–	2·06	99,274,000
1919	2,880,301	14·25	40,975,300	57·22	2·40	98,341,000
1920	2,705,622	13·90	37,542,000	59·56	1·83	68,769,000
1921	3,501,217	11·15	39,054,000	56·62	0·91	35,539,000
1922	3,125,556	19·25	60,051,000	60·52	0·83	49,842,000
Averages.....1917-21	2,903,940	14·25	41,360,420	58·56	1·87	77,213,460
Oats.....1917	1,500,000	30·25	45,375,000	27·27	0·67	30,401,300
1918	1,714,894	31·75	54,473,500	35·21	0·71	38,676,000
1919	1,847,267	31·25	57,698,000	33·42	0·72	41,420,000
1920	1,873,954	30·75	57,657,000	34·89	0·56	32,007,000
1921	2,226,376	22·27	49,442,500	32·03	0·30	14,833,000
1922	1,851,668	40·25	74,433,000	36·04	0·31	23,074,000
Averages.....1917-21	1,832,498	29·00	52,929,200	32·56	0·59	31,467,460
Barley.....1917	708,000	22·50	15,930,000	46·27	1·07	17,045,100
1918	1,102,965	25·25	27,963,400	48·54	0·89	24,887,000
1919	893,947	19·25	17,149,400	43·90	1·17	20,137,000
1920	839,078	21·00	17,520,000	46·31	0·80	13,988,000
1921	1,043,144	18·87	19,681,600	45·02	0·43	8,463,000
1922	968,783	29·75	28,863,000	47·54	0·41	11,834,000
Averages.....1917-21	917,427	21·50	19,648,880	46·01	0·86	16,904,020
Rye.....1917	37,000	17·25	638,300	54·03	1·62	1,034,000
1918	240,469	16·25	3,935,700	73·66	1·41	5,549,000
1919	298,932	13·75	4,089,400	54·89	1·28	5,228,000
1920	148,602	15·50	2,318,600	54·91	1·35	3,140,100
1921	257,793	13·83	3,564,700	54·90	0·79	2,816,000
1922	421,603	16·75	7,078,000	55·19	0·61	4,318,000
Averages.....1917-21	196,559	14·75	2,909,340	58·48	1·22	3,553,420
Peas.....1919	5,666	14·25	81,400	60·00	2·08	170,000
1920	4,162	15·00	62,200	60·00	1·10	68,400
1921	10,958	13·75	151,400	60·00	2·50	378,500
1922	11,000	23·50	258,500	58·00	1·25	323,000
Averages.....1919-21	6,928	14·25	98,333	60·00	2·09	205,633

1.—Area, Yield, Quality and Value of Principal Field Crops in Canada, 1917-22 and Five-Year Average, 1917-21—con.

Field crops.	Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per bushel.	Total value.
	acres.	bush.	bush.	lb.	$	$
Manitoba—con.						
Mixed grains.....1917	1,400	31·00	43,400	–	1·25	54,250
1918	30,309	28·25	856,000	43·50	1·03	882,000
1919	30,355	25·00	759,000	40·56	1·40	1,063,000
1920	28,800	21·25	612,000	43·50	1·87	1,144,000
1921	10,473[1]	19·85	208,000	42·50	0·40	83,000
1922	13,503	30·00	405,000	48·00	0·38	154,000
Averages.....1917-21	20,267	24·50	495,680	42·51	1·30	645,250
Flaxseed.....1917	16,300	9·00	146,700	54·50	2·85	418,100
1918	107,961	10·00	1,091,000	54·72	3·15	3,437,000
1919	57,379	9·00	520,300	55·05	4·26	2,215,000
1920	146,455	7·90	1,157,800	54·66	2·25	2,587,700
1921	61,689	8·83	544,700	54·78	1·50	817,000
1922	66,680	11·00	734,000	55·54	1·80	1,321,000
Averages.....1917-21	77,957	8·75	692,100	54·74	2·73	1,894,960
		centals.	centals.		per cental.	
Potatoes.....1917	34,400	63·55	2,185,800	–	1·27	2,769,000
1918	45,000	111·00	4,995,000	–	0·93	4,662,000
1919	42,000	75·55	3,172,500	–	1·34	4,266,000
1920	37,000	55·30	2,046,000	–	2·32	4,733,300
1921	38,081	92·30	3,514,920	–	0·75	2,636,000
1922	38,798	96·00	3,725,000	–	0·47	1,751,000
Averages.....1917-21	39,297	81·00	3,182,844	–	1·20	3,813,260
Turnips, mangolds, etc..1917	2,500	92·60	231,500	–	1·26	292,000
1918	9,910	125·85	1,247,400	–	0·88	1,097,700
1919	6,645	92·05	556,500	–	1·19	663,000
1920	7,404	72·65	538,000	–	1·87	1,005,100
1921	4,411	115·65	510,050	–	0·54	275,000
1922	4,630	145·25	673,000	–	0·56	377,000
Averages.....1917-21	6,054	101·85	616,690	–	1·08	666,560
		tons.	tons.		per ton.	
Hay and clover.....1917	75,000	1·00	75,000	–	11·11	833,300
1918	74,000	1·00	74,000	–	16·00	1,184,000
1919	260,378	1·50	401,400	–	16·99	6,818,000
1920	208,512	1·50	311,900	–	16·00	4,968,900
1921	244,672	1·55	378,500	–	13·00	4,921,000
1922	222,617	1·75	394,000	–	10·00	3,940,000
Averages.....1917-21	172,512	1·45	248,160	–	15·09	3,745,040
Alfalfa.....1917	4,400	2·07	9,100	–	13·45	122,400
1918	3,600	2·25	8,100	–	18·00	145,800
1919	5,181	2·20	11,400	–	22·40	256,200
1920	3,679	2·00	7,410	–	22·45	166,400
1921	5,676	2·59	14,700	–	17·00	250,000
1922	4,609	2·60	12,200	–	14·00	171,000
Averages.....1917-21	4,507	2·25	10,142	–	18·55	188,160
Fodder corn.....1917	9,800	4·86	47,600	–	7·50	357,000
1918	12,340	5·50	67,900	–	10·50	713,000
1919	16,867	6·80	114,500	–	13·28	1,520,000
1920	17,042	4·40	74,400	–	19·00	1,412,000
1921	17,296	7·20	124,900	–	9·00	1,124,000
1922	28,853	7·50	216,000	–	6·00	1,296,000
Averages.....1917-21	14,669	5·85	85,860	–	11·94	1,025,200
Saskatchewan—		bush.	bush.		per bush.	
Fall wheat.....1917	10,000	17·00	170,000	60·00	2·07	351,900
Spring wheat.....1917	8,263,250	14·25	117,751,300	60·92	1·95	229,615,000
1918	9,249,260	10·00	92,493,000	60·97	1·99	184,061,000
1919	10,587,363	8·50	89,994,000	59·00	2·32	208,787,000
1920	10,061,069	11·25	113,135,300	59·95	1·55	175,360,000
1921	13,556,708	13·75	188,600,000	58·36	0·76	142,880,000
1922	12,332,297	20·25	250,167,000	61·50	0·85	212,642,000
Averages.....1917-21	10,343,530	11·50	120,274,720	59·84	1·56	188,140,600

[1] Including other grains.

1.—Area, Yield, Quality and Value of Principal Field Crops in Canada, 1917-22 and Five-Year Average, 1917-21—con.

Field crops.	Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per bushel.	Total value.
	acres.	bush.	bush.	lb.	$	$
Saskatchewan—con.						
All wheat.....1917	8,273,250	14·25	117,921,300	60·91	1·95	229,966,900
1918	9,249,260	10·00	92,493,000	60·97	1·99	184,061,000
1919	10,587,363	8·50	89,994,000	59·00	2·32	208,787,000
1920	10,061,069	11·25	113,135,360	59·95	1·55	175,360,000
1921	13,556,708	13·75	188,000,000	58·36	0·76	142,880,000
1922	12,332,297	20·25	250,167,000	61·50	0·85	212,642,000
Averages.....1917-21	10,345,530	11·50	120,308,720	59·84	1·56	188,210,980
Oats.....1917	4,521,600	27·25	123,213,600	34·58	0·62	76,392,400
1918	4,988,499	21·50	107,253,000	34·38	0·70	75,077,000
1919	4,837,747	23·10	112,157,000	35·48	0·70	78,510,000
1920	5,106,822	27·70	141,549,000	35·00	0·41	58,035,000
1921	5,681,522	30·00	170,513,000	35·24	0·24	40,372,000
1922	5,098,104	35·25	179,708,000	35·93	0·29	52,115,000
Averages.....1917-21	5,027,238	26·00	130,937,120	34·94	0·50	65,677,280
Barley.....1917	669,900	21·00	14,067,900	46·84	1·00	14,067,900
1918	699,296	17·00	11,888,000	46·10	0·88	10,461,000
1919	492,586	18·20	8,971,000	46·87	1·08	9,689,000
1920	519,014	20·25	10,510,500	46·75	0·66	6,931,000
1921	497,730	26·75	13,343,000	47·75	0·36	4,858,000
1922	636,456	29·00	18,511,000	47·97	0·38	6,971,600
Averages.....1917-21	575,705	20·50	11,754,280	46·86	0·78	9,201,380
Rye.....1917	53,250	18·75	998,400	43·00	1·63	1,627,400
1918	123,500	11·50	1,420,000	55·19	1·50	2,130,000
1919	190,482	10·50	2,000,000	55·52	1·31	2,620,000
1920	172,449	14·70	2,535,000	56·14	1·26	3,194,000
1921	1,208,299	11·25	13,546,000	56·04	0·67	9,080,000
1922	900,931	18·00	16,164,000	56·23	0·53	8,567,000
Averages.....1917-21	349,596	11·75	4,099,880	53·18	0·91	3,730,280
Peas.....1917	2,605	17·25	44,900	60·00	4·00	179,600
1918	4,251	20·00	85,000	60·00	1·50	128,000
1919	4,853	18·00	87,300	60·00	4·00	349,000
1920	2,519	14·50	36,500	–	2·00	73,000
1921	2,535	19·26	48,800	61·00	2·50	122,000
1922	2,302	22·50	51,800	60·60	2·00	103,600
Averages.....1917-21	3,353	18·00	60,500	60·24	2·80	170,320
Beans.....1918	861	18·00	15,000	–	6·45	97,000
1919	1,820	10·00	18,200	60·00	4·00	72,800
1920	793	17·00	13,500	–	4·00	54,000
1921	967	16·25	15,700	60·00	2·00	31,000
1922	2,199	12·75	28,000	60·00	2·50	70,000
Averages.....1918-21	1,110	14·00	15,600	60·00	4·09	63,700
Mixed grains.....1917	39,500	32·00	1,264,000	50·00	1·25	1,580,000
1918	23,449	21·00	492,000	45·00	1·10	541,000
1919	22,017	35·00	771,000	–	1·40	1,079,000
1920	18,361	33·50	615,000	–	1·25	769,000
1921	23,081	30·00	692,000	40·20	0·28	194,000
1922	29,425	29·25	861,000	45·00	0·30	258,000
Averages.....1917-21	25,282	30·25	766,800	45·07	1·09	832,600
Flaxseed.....1917	753,700	6·25	4,710,600	55·55	2·60	12,247,600
1918	840,957	5·00	4,205,000	54·43	3·10	13,036,000
1919	929,945	4·80	4,490,000	53·82	4·14	18,589,000
1920	1,140,921	5·00	5,705,000	53·95	1·82	10,383,000
1921	426,849	7·50	3,230,000	55·38	1·38	4,443,000
1922	466,177	8·75	4,079,000	55·94	1·71	6,975,000
Averages.....1917-21	818,474	5·45	4,468,120	54·63	2·63	11,739,720
		centals.	centals.		per cental.	
Potatoes.....1917	67,700	79·85	5,406,000	–	1·42	7,659,000
1918	59,783	69·75	4,170,540	–	1·60	6,672,900
1919	66,176	102·00	6,750,000	–	1·48	10,013,000
1920	53,814	76·50	4,116,600	–	2·08	8,576,000
1921	58,606	105·90	6,206,400	–	0·83	5,172,000
1922	55,600	72·25	4,012,000	–	0·80	3,210,000
Averages.....1917-21	61,216	87·05	5,329,908	–	1·43	7,618,580

1.—Area, Yield, Quality and Value of Principal Field Crops in Canada, 1917-22 and Five-Year Average, 1917-21—con.

Field crops.	Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per cental.	Total value.
	acres.	centals	centals	lb.	$	$
Saskatchewan—con.						
Turnips, mangolds, etc..1917	11,103	77·75	863,500	-	1·82	1,572,000
1918	9,760	112·85	1,101,650	-	1·82	2,005,000
1919	13,932	128·85	1,795,500	-	2·24	4,022,000
1920	10,449	150·50	1,572,500	-	1·88	2,956,000
1921	7,870	84·75	667,000	-	1·20	800,000
1922	8,666	112·25	973,000	-	0·98	953,000
Averages.....1917-21	10,623	112·95	1,200,030	-	1·89	2,271,000
		tons.	tons.		per ton.	
Hay and clover.....1917	260,275	1·42	369,600	-	10·12	3,740,000
1918	315,117	1·15	362,400	-	11·92	4,319,800
1919	265,417	1·05	279,000	-	17·00	4,743,000
1920	234,532	1·40	328,300	-	10·00	3,283,000
1921	278,601	1·60	445,800	-	11·25	5,015,000
1922	255,024	1·40	360,400	-	8·00	2,883,000
Averages.....1917-21	270,788	1·30	357,020	-	11·82	4,220,160
Alfalfa.....1917	9,500	1·61	15,300	-	13·40	205,000
1918	6,943	1·40	9,700	-	17·50	169,800
1919	11,526	1·60	18,400	-	27·50	506,000
1920	10,473	2·25	23,600	-	20·00	472,000
1921	8,926	3·00	26,800	-	17·50	469,000
1922	7,341	1·85	13,600	-	12·50	170,000
Averages.....1917-21	9,474	2·00	18,760	-	19·42	364,360
Fodder corn.....1917	15,658	2·00	31,300	-	8·00	250,400
1918	11,186	5·65	63,200	-	10·50	663,600
1919	6,690	12·50	84,000	-	12·50	1,050,000
1920	16,685	3·75	62,600	-	18·00	1,127,000
1921	22,789	11·35	258,700	-	8·50	2,199,000
1922	38,645	4·85	187,000	-	7·00	1,309,000
Averages.....1917-21	14,602	6·85	99,960	-	10·58	1,058,000
					per bush.	
Alberta—		bush.	bush.			
Fall wheat.....1917	51,700	20·50	1,059,900	60·53	1·98	2,098,600
1918	44,065	15·00	661,000	60·00	1·92	1,269 000
1919	40,600	15·75	640,000	60·80	2·43	1,555,000
1920	38,000	18·75	713,000	61·00	1·52	1,084,000
1921	85,114	17·25	1,468,000	60·33	0·71	1,042,000
1922	64,554	13·00	839,000	60·50	0·77	646,000
Averages.....1917-21	51,896	17·50	908,380	60·53	1·55	1,409,720
Spring wheat.....1917	2,845,600	18·25	51,932,200	60·86	1·73	89,842,700
1918	3,848,424	6·00	23,091,000	59·94	1·92	44,335,000
1919	4,241,903	8·00	33,935,000	60·07	2·31	78,390,000
1920	4,036,483	20·50	82,748,000	61·32	1·52	125,777,000
1921	5,038,290	10·25	51,576,000	61·77	0·77	39,714,000
1922	5,701,041	11·25	64,137,000	60·58	0·77	49,385,000
Averages.....1917-21	4,002,140	12·15	48,656,440	60·79	1·55	75,611,740
All wheat.....1917	2,897,300	18·25	52,992,100	60·81	1·74	91,941,300
1918	3,892,489	6·00	23,752,000	59·97	1·92	45,604,000
1919	4,282,503	8·00	34,575,000	60·11	2·31	79,945,000
1920	4,074,483	20·50	83,461,000	61·30	1·52	126,861,000
1921	5,123,404	10·35	53,044,000	61·66	0·77	40,756,000
1922	5,765,595	11·25	64,976,000	60·58	0·77	50,031,000
Averages.....1917-21	4,054,036	12·25	49,564,820	60·77	1·55	77,021,460
Oats.....1917	2,537,900	34·00	86,288,600	37·09	0·63	54,361,800
1918	2,651,548	22·75	60,323,000	35·94	0·73	44,036,000
1919	2,767,372	23·75	65,725,000	36·60	0·64	42,064,000
1920	3,089,700	37·25	115,091,000	38·09	0·36	41,433,000
1921	2,911,743	22·00	64,192,000	37·38	0·24	15,406,000
1922	1,614,500	22·00	35,519,000	36·07	0·35	12,432,000
Averages.....1917-21	2,791,653	28·00	78,323,920	37·02	0·50	39,460,160
Barley.....1917	472,100	22·00	10,386,200	45·16	0·98	10,178,500
1918	470,073	16·50	7,756,000	44·17	0·97	7,523,000
1919	414,212	25·50	10,562,000	47·00	1·09	11,512,600
1920	480,699	26·50	12,739,000	48·12	0·62	7,898,000
1921	568,191	20·50	11,657,000	48·57	0·32	3,730,000
1922	378,053	16·50	6,238,000	46·99	0·42	2,620,000
Averages.....1917-21	481,055	22·00	10,620,040	46·60	0·77	8,168,420

1.—Area, Yield, Quality and Value of Principal Field Crops in Canada, 1917-22 and Five-Year Average, 1917-21—con.

Field crops.		Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per bushel.	Total value.
		acres.	bush.	bush.	lb.	$	$
Alberta—con.							
Rye	1917	30,880	20·50	633,000	55·25	1·50	949,500
	1918	47,877	17·25	826,000	54·90	1·41	1,165,000
	1919	83,804	14·00	1,173,000	55·14	1·42	1,666,000
	1920	160,960	21·25	3,420,000	56·85	1·25	4,275,000
	1921	222,136	9·00	1,999,000	55·29	0·62	1,239,000
	1922	603,583	10·25	6,187,000	55·73	0·55	3,403,000
Averages	1917-21	109,131	14·75	1,610,200	55·49	1·15	1,858,900
Peas	1917	1,851	17·50	32,400	60·00	2·00	64,800
	1918	1,994	18·00	36,000	60·00	1·50	54,000
	1919	1,603	18·00	29,000	60·00	3·00	87,000
	1920	2,899	17·00	49,000	60·00	2·00	98,000
	1921	2,357	24·00	56,600	60·00	2·00	113,000
	1922	1,591	11·60	18,500	60·00	2·00	37,000
Averages	1917-21	2,141	19·00	40,600	60·00	2·05	83,360
Beans	1918	763	18·00	14,000	60·00	6·45	90,000
	1919	690	10·00	6,900	60·00	4·00	28,000
	1920	2,305	17·00	39,000	60·00	4·00	156,000
	1921	339	19·00	6,400	60·00	2·00	13,000
	1922	100	14·25	1,400	60·00	2·00	2,800
Averages	1918-21	1,024	16·25	16,575	60·00	4·33	71,750
Mixed grains	1917	24,027	25·75	618,700	51·50	1·20	742,400
	1918	27,989	21·50	602,000	40·00	1·15	692,000
	1919	26,000	36·25	943,000	57·00	0·83	783,000
	1920	8,398	30·00	252,000	43·00	1·00	252,000
	1921	9,813	22·75	223,000	43·00	0·27	60,000
	1922	14,314	25·50	370,000	44·50	0·40	148,000
Averages	1917-21	19,245	27·50	527,740	46·90	0·96	505,880
Flaxseed	1917	139,800	7·00	978,600	54·00	2·78	2,720,500
	1918	95,920	5·00	480,000	55·25	3·12	1,498,000
	1919	80,690	2·75	222,000	55·75	4·15	921,000
	1920	103,700	7·00	726,000	55·40	1·83	1,329,000
	1921	28,434	6·00	171,000	57·00	1·28	219,000
	1922	22,186	4·00	88,700	54·79	1·52	135,000
Averages	1917-21	89,709	5·75	515,520	55·48	2·59	1,337,500
			centals.	centals.		per cental.	
Potatoes	1917	48,917	90·85	4,445,400	–	1·27	5,631,000
	1918	44,247	42·30	1,871,640	–	1·85	3,462,500
	1919	45,848	107·85	4,944,720	–	1·38	6,840,200
	1920	43,000	99·60	4,282,800	–	1·67	7,138,000
	1921	51,377	95·10	4,885,800	–	0·83	4,072,000
	1922	42,502	65·75	2,791,000	–	0·83	2,317,000
Averages	1917-21	46,678	87·55	4,086,072	–	1·33	5,428,740
Turnips, mangolds, etc.	1917	10,947	103·75	1,136,000	–	1·48	1,681,000
	1918	12,506	94·25	1,178,700	–	1·32	1,555,900
	1919	12,500	110·75	1,384,400	–	2·12	2,934,900
	1920	12,300	130·85	1,609,750	–	2·00	3,219,500
	1921	8,202	76·75	629,500	–	0·60	378,000
	1922	9,289	86·75	806,000	–	0·60	484,000
Averages	1917-21	11,291	105·20	1,187,670	–	1·65	1,953,860
			tons.	tons.		per ton.	
Hay and clover	1917	493,522	1·48	730,400	–	10·92	7,976,000
	1918	469,000	0·85	398,700	–	15·82	6,307,400
	1919	433,296	1·10	476,600	–	20·89	9,956,200
	1920	383,527	1·30	498,600	–	20·00	9,972,000
	1921	454,883	1·00	454,900	–	10·00	4,549,000
	1922	291,723	0·80	234,400	–	16·00	3,750,000
Averages	1917-21	446,846	1·15	511,840	–	15·14	7,752,120
Grain hay	1921	–	–	1,133,476	–	10·00	11,335,000
	1922	1,220,000	1·25	1,525,000	–	12·00	18,300,000

1.—Area, Yield, Quality and Value of Principal Field Crops in Canada, 1917-22 and Five-Year Average, 1917-21—con.

Field crops.		Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per ton.	Total value.
		acres.	tons.	tons.	lb.	$	$
Alberta—con.							
Alfalfa	1917	31,396	2·05	64,400	–	10·73	691,000
	1918	24,285	2·00	48,600	–	21·50	1,044,900
	1919	21,553	2·00	43,000	–	29·16	1,254,000
	1920	19,906	2·25	44,800	–	24·00	1,075,000
	1921	30,000	1·75	52,500	–	12·00	630,000
	1922	26,539	2·20	58,400	–	15·00	876,000
Averages	1917–21	25,428	2·00	50,660	–	18·53	938,980
Fodder corn	1917	3,976	1·00	4,000	–	7·00	28,000
	1918	700	5·50	3,800	–	10·50	40,000
	1919	900	5·58	5,000	–	10·50	52,500
	1920	7,644	4·25	32,500	–	18·00	585,000
	1921	6,991	10·00	69,900	–	4·00	280,000
	1922	15,648	5·25	82,200	–	5·00	411,000
Averages	1917–21	4,042	5·70	23,040	–	8·55	197,100
			bush.	bush.		per bush.	
British Columbia—							
Fall wheat	1917	3,240	31·75	102,850	60·67	1·92	197,500
	1918	7,200	24·75	178,000	59·67	2·15	383,000
	1919	12,699	24·75	314,000	59·50	2·88	904,000
	1920	13,762	19·25	264,200	60·00	2·18	576,000
	1921	14,101	27·25	384,300	61·25	1·15	442,000
	1922	14,080	23·00	324,000	60·00	1·18	382,000
Averages	1917–21	10,200	24·25	248,670	60·22	2·01	500,500
Spring wheat	1917	18,100	28·50	515,850	59·55	2·00	1,031,700
	1918	29,600	22·00	638,000	60·25	2·08	1,327,000
	1919	31,202	22·00	686,000	58·50	2·79	1,914,000
	1920	32,453	18·75	610,100	60·00	2·21	1,348,300
	1921	32,426	24·50	794,400	60·00	1·25	993,000
	1922	32,324	22·00	711,000	61·17	1·24	882,000
Averages	1917–21	28,636	22·75	648,870	59·66	2·04	1,322,800
All wheat	1917	21,340	29·00	618,700	59·94	1·99	1,229,200
	1918	36,200	22·50	816,000	59·96	2·09	1,710,000
	1919	43,901	22·75	1,000,000	59·60	2·82	2,818,000
	1920	46,215	19·00	874,300	60·00	2·20	1,924,300
	1921	46,527	25·25	1,178,700	60·05	1·22	1,435,000
	1922	46,404	22·25	1,035,000	60·70	1·22	1,264,000
Averages	1917–21	38,837	23·10	897,540	59·79	2·03	1,823,300
Oats	1917	60,200	53·75	3,235,800	35·50	0·90	2,912,200
	1918	39,000	39·75	1,550,000	34·17	1·00	1,550,000
	1919	45,021	47·25	2,127,000	36·00	1·07	2,276,000
	1920	47,992	34·75	1,663,000	36·00	0·96	1,596,500
	1921	56,535	48·75	2,756,000	35·14	0·57	1,571,000
	1922	57,513	43·75	2,516,000	37·14	0·62	1,560,000
Averages	1917–21	49,749	45·50	2,266,360	35·36	0·87	1,981,140
Barley	1917	5,500	29·25	160,900	48·67	1·28	206,000
	1918	7,927	26·50	209,000	52·50	1·47	307,000
	1919	10,497	33·00	346,000	47·75	1·82	630,000
	1920	9,646	37·75	364,100	50·00	1·50	546,200
	1921	8,333	34·75	307,000	48·33	0·75	230,000
	1922	7,306	29·25	214,000	48·78	0·91	195,000
Averages	1917–21	8,481	32·75	277,400	49·45	1·38	383,840
Rye	1918	820	30·00	25,000	60·00	2·07	52,000
	1919	4,911	22·50	110,000	54·75	2·08	229,000
	1920	5,367	25·75	138,200	55·00	2·02	279,200
	1921	5,614	22·50	126,300	54·00	1·10	139,000
	1922	6,982	20·00	140,000	55·50	0·95	133,000
Averages	1918–21	4,178	25·00	99,875	55·94	1·75	174,800
Peas	1917	1,338	23·75	31,800	59·83	2·46	78,200
	1918	2,193	21·50	47,000	60·00	3·00	141,000
	1919	2,251	23·00	52,000	59·00	2·60	137,000
	1920	2,657	26·00	69,100	59·00	3·05	211,000
	1921	2,565	25·00	64,100	59·43	2·20	141,000
	1922	2,214	25·75	57,000	60·00	2·08	119,000
Averages	1917–21	2,201	24·00	52,800	59·45	2·68	141,640

1.—Area, Yield, Quality and Value of Principal Field Crops in Canada, 1917-22 and Five-Year Average, 1917-21—concluded.

Field crops.		Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per bushel.	Total value.
		acres.	bush.	bush.	lb.	$	$
British Columbia—con.							
Beans	1918	2,748	18·50	51,000	–	4·20	214,000
	1919	1,677	17·25	29,000	60·00	3·75	109,000
	1920	1,615	20·00	32,300	60·00	4·50	145,400
	1921	1,118	21·00	23,500	60·50	2·25	53,000
	1922	1,122	20·00	22,400	60·00	2·40	54,000
Averages	1918–21	1,789	19·00	33,950	60·17	3·84	130,350
Mixed grains	1917	1,850	40·00	74,000	–	0·70	51,800
	1918	3,228	21·50	69,000	–	1·10	76,000
	1919	4,017	36·50	147,000	50·00	1·37	201,000
	1920	4,893	36·00	176,100	41·00	1·25	220,000
	1921	5,663	34·00	193,000	–	0·75	145,000
	1922	5,009	31·00	155,000	45·00	0·70	109,000
Averages	1917–21	3,930	33·50	131,820	45·50	1·05	138,760
			centals.	centals.		per cental.	
Potatoes	1917	15,024	99·90	1,501,200	–	1·15	1,726,400
	1918	15,013	136·80	2,053,800	–	1·62	3,320,300
	1919	18,000	102·00	1,836,000	–	1·67	3,060,000
	1920	17,780	99·00	1,760,220	–	2·13	3,755,000
	1921	16,704	105·60	1,764,000	–	1·50	2,646,000
	1922	19,187	120·00	2,302,200	–	1·17	2,694,000
Averages	1917–21	16,504	108·05	1,783,044	–	1·63	2,901,540
Turnips, mangolds, etc.	1917	4,590	172·35	791,000	–	1·28	1,012,000
	1918	5,758	211·00	1,214,950	–	1·20	1,457,000
	1919	7,387	182·50	1,348,000	–	1·50	2,022,000
	1920	7,403	217·50	1,610,000	–	1·62	2,608,000
	1921	6,809	183·00	1,246,000	–	1·34	1,670,000
	1922	7,347	200·00	1,469,000	–	0·76	1,116,000
Averages	1917–21	6,390	194·35	1,241,990	–	1·41	1,753,980
			tons.	tons.		per ton.	
Hay and clover	1917	129,254	1·85	239,000	–	17·60	4,206,400
	1918	114,414	1·90	217,400	–	33·25	7,228,600
	1919	126,251	1·50	189,000	–	35·25	6,662,000
	1920	127,017	2·00	254,000	–	35·00	8,890,000
	1921	137,301	2·30	315,800	–	23·68	7,478,000
	1922	141,413	1·65	233,000	–	27·25	6,349,000
Averages	1917–21	126,847	1·90	243,040	–	28·36	6,893,000
Grain hay	1919	60,390	2·50	151,000	–	29·00	4,379,000
	1920	60,612	2·25	136,400	–	33·12	4,518,000
	1921	57,603	2·70	155,500	–	20·20	3,141,000
	1922	56,626	1·75	99,100	–	26·34	2,610,000
Averages	1919–21	59,535	2·50	147,633	–	27·18	4,012,667
Alfalfa	1917	8,681	2·58	22,400	–	22·92	513,400
	1918	12,268	3·25	39,900	–	32·25	1,286,800
	1919	13,331	3·00	40,000	–	37·00	1,480,000
	1920	13,478	3·00	40,400	–	33·71	1,361,900
	1921	12,785	3·70	47,300	–	23·70	1,121,000
	1922	15,918	3·00	47,800	–	27·00	1,291,000
Averages	1917–21	12,109	3·15	38,000	–	30·33	1,152,620
Fodder corn	1917	2,239	7·00	15,700	–	15·00	235,500
	1918	2,016	10·10	20,400	–	10·00	204,000
	1919	4,368	11·50	50,000	–	12·00	600,000
	1920	4,713	11·50	54,200	–	17·75	962,000
	1921	4,741	9·85	46,700	–	14·50	677,000
	1922	4,715	11·00	51,900	–	15·00	779,000
Averages	1917–21	3,616	10·35	37,400	–	14·32	535,700

2.—Annual Average Yields per acre of Field Crops for Canada and by Provinces from 1915 to 1922, with Decennial Averages for the years 1912-21.

Field Crops.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	Ten year average, 1912-21.
Canada—	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.
Fall wheat	28·50	21·50	21·50	19·00	23·75	24·00	21·50	21·25	23·00
Spring wheat	25·75	16·75	15·50	10·75	9·50	14·00	12·75	17·75	15·50
All wheat	26·00	17·00	15·75	11·00	10·00	14·50	13·00	17·75	15·75
Oats	40·25	37·25	30·25	28·75	26·25	33·50	25·25	33·75	32·25
Barley	31·50	23·75	23·00	24·50	21·25	24·75	21·25	27·75	25·00
Rye	20·50	19·50	18·25	15·25	13·50	17·50	11·75	15·50	16·00
Peas	17·75	14·50	15·25	13·25	14·75	19·00	14·25	18·00	16·25
Beans	16·75	12·75	13·75	15·50	16·50	17·50	17·50	16·25	16·00
Buckwheat	23·00	17·50	18·00	20·75	23·50	23·75	22·75	22·50	22·25
Mixed grains	37·50	25·75	32·50	38·75	31·00	40·00	25·75	35·50	33·50
Flax seed	13·25	12·50	6·50	5·75	5·00	5·60	7·75	8·85	9·50
Corn for husking	56·75	36·25	33·00	56·75	61·00	49·25	50·25	43·25	52·50
	centals.	centals.	centals.	centals.	centals.	centals.	centals.	centals.	centals.
Potatoes	74·55	80·25	72·95	85·15	92·00	102·35	91·75	81·55	91·20
Turnips, etc	192·00	132·00	145·35	188·75	176·95	200·45	173·80	196·10	182·60
	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.
Hay and clover	1·36	1·86	1·66	1·40	1·55	1·30	1·07	1·45	1·40
Fodder corn	10·17	6·65	7·34	9·50	9·75	9·60	10·75	9·00	9·40
Sugar beets	7·83	4·75	8·40	10·00	9·80	11·37	9·45	9·20	9·40
Alfalfa	2·65	2·91	2·39	2·25	2·20	2·45	2·50	2·65	2·45
Prince Edward Island	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.
Spring wheat	19·00	16·75	14·50	20·00	17·00	12·00	16·75	21·25	17·75
Oats	34·75	37·25	32·25	34·50	34·00	27·75	27·00	35·75	34·50
Barley	29·00	29·25	28·50	28·50	29·00	24·50	23·25	29·00	27·75
Peas	15·75	22·25	14·00	16·00	16·00	16·50	23·50	21·00	18·75
Buckwheat	29·00	27·25	29·00	21·75	20·75	23·50	24·75	27·25	26·25
Mixed grains	38·75	41·25	38·25	44·50	44·00	33·75	29·25	37·75	39·50
	centals.	centals.	centals.	centals.	centals.	centals.	centals.	centals.	centals.
Potatoes	68·85	123·60	105·00	102·00	75·00	102·00	96·95	74·75	103·65
Turnips, etc	224·75	238·50	252·70	260·25	259·20	241·00	285·20	285·00	247·75
	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.
Hay and clover	1·77	1·70	1·55	1·50	1·80	1·25	0·80	1·45	1·50
Fodder corn	13·00	13·00	7·00	5·25	12·00	8·00	10·00	7·50	9·50
Nova Scotia—	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.
Spring wheat	18·50	19·50	15·75	22·25	19·50	19·50	15·50	20·25	19·50
Oats	31·25	34·75	29·25	37·25	36·00	30·25	28·75	33·25	32·75
Barley	26·25	26·25	24·75	30·00	31·25	26·00	23·00	27·25	27·50
Rye	15·00	17·00	15·00	14·50	29·50	15·00	14·25	20·25	19·75
Peas	18·75	17·75	14·25	18·75	20·00	20·50	16·75	22·00	19·75
Beans	17·50	16·25	17·75	16·25	12·75	18·50	19·25	19·00	17·00
Buckwheat	21·75	24·50	21·00	23·00	25·25	22·25	20·50	24·00	23·75
Mixed grains	34·25	34·00	24·00	36·00	37·50	32·50	30·00	30·50	32·00
	centals.	centals.	centals.	centals.	centals.	centals.	centals.	centals.	centals.
Potatoes	84·75	120·60	104·95	114·45	96·60	122·25	98·25	97·10	113·55
Turnips, etc	195·00	202·00	175·45	195·60	268·85	215·85	247·50	215·60	220·50
	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.
Hay and clover	1·78	1·80	1·65	1·45	2·10	1·50	1·35	1·55	1·65
Fodder corn	4·64	8·75	9·20	9·50	9·50	8·00	6·50	7·55	8·55
Alfalfa	2·30	5·00	3·50	–	–	–	–	–	–
New Brunswick—	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.
Spring wheat	19·00	17·25	12·00	19·00	17·50	15·75	15·25	17·50	17·25
Oats	27·75	30·50	22·50	31·50	30·25	29·50	25·00	30·75	28·75
Barley	23·00	23·75	22·00	24·75	26·75	23·75	17·00	25·00	23·75
Peas	17·00	16·50	15·00	14·75	14·75	15·00	12·75	14·25	15·00
Beans	21·25	15·25	19·50	15·50	16·50	16·25	12·75	18·00	16·00
Buckwheat	22·75	22·75	19·50	20·75	25·00	22·75	22·25	25·00	23·50
Mixed grains	31·50	34·25	19·50	32·50	33·75	29·75	23·50	31·00	30·00
	centals.	centals.	centals.	centals.	centals.	centals.	centals.	centals.	centals.
Potatoes	86·55	115·20	89·90	95·10	85·65	118·80	129·75	98·50	111·30
Turnips, etc	164·50	205·50	150·25	175·00	183·25	176·50	174·75	198·65	172·25
	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.
Hay and clover	1·39	1·48	1·60	1·50	1·40	1·20	0·90	1·50	1·35
Fodder corn	7·00	10·00	9·00	4·50	5·00	8·00	7·00	7·50	6·25
Quebec—	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.
Spring wheat	20·00	15·00	14·00	17·25	16·75	17·00	15·25	15·75	16·50
Oats	30·25	22·75	21·75	27·25	26·75	30·25	21·25	27·75	26·75
Barley	26·50	20·00	18·50	24·00	22·75	25·25	21·25	22·75	23·00
Rye	16·75	14·25	16·75	16·25	17·25	18·75	17·25	15·50	17·00
Peas	16·50	14·00	12·00	15·50	15·00	17·00	14·75	14·25	15·25
Beans	22·00	17·75	15·00	17·00	19·75	18·00	18·75	17·00	17·50
Buckwheat	24·75	19·00	16·50	20·75	24·00	25·75	23·25	22·50	22·50

2.—Annual Average Yields per acre of Field Crops for Canada and by Provinces from 1915 to 1922, with Decennial Averages for the years 1912-21—con.

Field Crops.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	Ten year average, 1912-21.
Quebec—con.	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.
Mixed grains	29·75	20·25	21·25	27·00	27·00	29·25	24·00	26·75	26·50
Flax seed	12·00	10·50	8·25	11·25	9·75	11·50	11·50	10·00	10·75
Corn for husking	31·25	24·75	24·25	21·75	41·00	29·75	29·50	28·00	28·50
	centals.	centals.	centals.	centals.	centals.	centals.	centals.	centals.	centals.
Potatoes	89·85	78·60	48·00	88·20	108·90	111·30	97·50	82·35	93·45
Turnips, etc	154·10	132·50	112·25	147·75	158·75	164·65	159·50	158·15	148·60
	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.
Hay and clover	1·26	1·75	1·71	1·50	1·50	1·25	0·95	1·35	1·35
Fodder corn	8·61	8·00	8·50	7·25	8·25	8·00	9·00	7·25	8·00
Alfalfa	2·84	2·65	2·26	2·25	2·35	2·40	2·20	1·50	2·35
Ontario—	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.
Fall wheat	28·25	21·25	21·50	19·50	24·30	24·30	22·00	21·90	23·00
Spring wheat	22·25	16·25	19·50	23·25	15·60	16·80	12·50	16·90	18·00
All wheat	27·75	20·75	21·25	21·25	21·20	22·30	20·10	21·25	22·00
Oats	39·75	25·50	36·50	45·00	29·30	44·90	23·40	38·20	35·50
Barley	34·25	23·00	31·00	36·75	23·10	34·40	22·00	32·20	29·75
Rye	20·00	17·50	17·75	16·00	15·80	17·70	14·50	16·40	17·00
Peas	17·75	14·25	16·75	21·00	14·30	20·20	13·60	19·70	16·50
Beans	16·00	11·75	11·75	13·75	12·60	16·70	16·10	15·60	15·00
Buckwheat	21·75	14·50	18·75	20·50	22·80	22·30	22·70	21·60	21·25
Mixed grains	40·00	26·00	37·75	44·25	31·40	44·20	26·20	38·50	36·00
Flax seed	12·50	9·25	13·00	12·25	9·40	10·70	8·90	10·70	12·50
Corn for husking	58·50	37·25	37·25	66·75	68·60	53·00	54·00	46·50	56·25
	centals.	centals.	centals.	centals.	centals.	centals.	centals.	centals.	centals.
Potatoes	55·65	36·60	80·20	69·95	57·75	92·00	56·30	70·65	70·95
Turnips, etc	197·25	105·50	170·45	230·15	173·75	242·15	175·65	222·60	194·10
	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.
Hay and clover	1·32	2·00	1·70	1·32	1·59	1·26	1·11	1·56	1·40
Fodder corn	10·63	6·50	7·54	10·35	10·05	10·39	11·44	10·06	9·90
Sugar beets	7·83	4·75	8·40	10·00	9·80	11·37	9·45	9·20	9·40
Alfalfa	2·72	3·00	2·74	2·28	2·14	2·45	2·58	2·84	2·45
Manitoba—	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.
Fall wheat	23·25	16·00	22·25	18·00	–	–	–	–	–
Spring wheat	24·75	11·00	16·75	16·25	14·25	13·90	11·15	19·25	16·25
All wheat	24·75	11·00	16·75	16·25	14·25	13·90	11·15	19·25	16·25
Oats	38·50	33·50	30·25	31·75	31·25	30·75	22·27	40·25	31·75
Barley	29·50	20·00	22·50	25·25	19·25	21·00	18·87	29·75	23·25
Rye	18·00	18·50	17·25	16·25	13·75	15·50	13·83	16·75	15·00
Mixed grains	33·50	32·25	31·00	28·25	25·00	21·25	19·85	30·00	25·00
Flax seed	8·25	13·75	9·00	10·00	9·00	7·90	8·83	11·00	9·75
	centals.	centals.	centals.	centals.	centals.	centals.	centals.	centals.	centals.
Potatoes	51·45	88·35	63·55	111·00	75·55	55·30	92·30	96·00	85·65
Turnips, etc	125·12	72·50	92·60	125·85	92·05	72·65	115·65	145·25	112·50
	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.
Hay and clover	1·02	1·83	1·00	1·00	1·50	1·50	1·55	1·75	1·45
Fodder corn	2·63	2·75	4·86	5·50	6·80	4·40	7·20	7·50	5·75
Alfalfa	1·36	2·75	2·07	2·25	2·20	2·00	2·59	2·60	2·25
Saskatchewan—	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.
Spring wheat	25·00	16·25	14·25	10·00	8·50	11·25	13·75	20·25	14·75
Oats	43·50	43·00	27·25	21·50	23·10	27·70	30·00	35·25	31·25
Barley	31·75	27·00	21·00	17·00	18·20	20·25	26·75	29·00	23·00
Rye	28·25	24·00	18·75	11·50	10·50	14·70	11·25	18·00	15·75
Peas	15·50	32·50	17·25	20·00	18·00	14·50	19·25	22·50	19·25
Mixed grains	25·25	35·00	32·00	21·00	35·00	33·50	30·00	29·25	30·75
Flax seed	13·25	12·25	6·25	5·00	4·80	5·00	7·50	8·75	9·50
	centals.	centals.	centals.	centals.	centals.	centals.	centals.	centals.	centals.
Potatoes	66·15	93·45	79·85	69·75	102·00	76·50	105·90	72·25	91·05
Turnips, etc	116·50	126·50	77·75	112·85	128·85	150·50	84·75	112·25	145·90
	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.
Hay and clover	1·39	2·35	1·42	1·15	1·05	1·40	1·60	1·40	1·40
Fodder corn	2·40	2·60	2·00	5·65	12·50	3·75	11·35	4·85	6·45
Alfalfa	1·83	2·85	1·61	1·40	1·60	2·25	3·00	1·85	2·00
Alberta—	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.
Fall wheat	31·25	30·25	20·50	15·00	15·75	18·75	17·25	13·00	21·25
Spring wheat	31·00	25·00	18·25	6·00	8·00	20·50	10·25	11·25	16·00
All wheat	31·00	25·00	18·25	6·00	8·00	20·50	10·35	11·25	16·25
Oats	46·00	48·00	34·00	22·75	23·75	37·25	22·00	22·00	34·50
Barley	32·25	29·00	23·00	16·50	25·50	26·50	20·50	16·50	25·00
Rye	23·50	24·50	20·50	17·25	14·00	21·25	9·00	10·25	16·00
Peas	20·00	20·00	17·50	18·00	18·00	17·00	24·00	11·60	18·75
Mixed grains	37·25	30·00	25·75	21·50	36·25	30·00	22·75	25·50	28·25
Flax seed	14·00	13·75	7·00	5·00	2·75	7·00	6·00	4·00	8·75

2.—Annual Average Yields per acre of Field Crops for Canada and by Provinces from 1915 to 1922, with Decennial Averages for the years 1912-21—concluded.

Field Crops.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	Ten year average, 1912-21.
Alberta—con.	centals.	centals.	centals.	centals.	centals.	centals.	centals.	centals.	centals.
Potatoes	85·20	98·25	90·85	42·30	107·85	99·60	95·10	65·75	91·80
Turnips, etc	117·60	139·75	103·75	94·25	110·75	130·85	76·75	86·75	110·50
	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.
Hay and clover	1·31	1·93	1·48	0·85	1·10	1·30	1·00	0·80	1·25
Fodder corn	3·42	2·56	1·00	5·50	5·58	4·25	10·00	5·25	5·25
Alfalfa	2·15	2·65	2·05	2·00	2·00	2·25	1·75	2·20	2·25
British Columbia—	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.
Fall wheat	33·50	36·75	31·75	24·75	24·75	19·25	27·25	23·00	27·25
Spring wheat	32·50	31·00	28·50	22·00	22·00	18·75	24·50	22·00	24·25
All wheat	32·75	31·00	29·00	22·50	22·75	19·00	25·25	22·25	25·25
Oats	61·75	60·50	53·75	39·75	47·25	34·75	48·75	43·75	52·25
Barley	40·25	45·75	29·25	26·50	33·00	37·75	34·75	29·25	34·50
Peas	29·75	33·75	23·75	21·50	23·00	26·00	25·00	25·75	26·50
Mixed grains	40·00	50·00	40·00	21·50	36·50	36·00	34·00	31·00	39·50
	centals.	centals.	centals.	centals.	centals.	centals.	centals.	centals.	centals.
Potatoes	148·35	113·40	99·90	136·80	102·00	99·00	165·60	120·00	117·75
Turnips, etc	227·75	256·00	172·35	211·00	182·50	217·50	183·00	200·00	210·35
	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.
Hay and clover	2·34	2·67	1·85	1·90	1·50	2·00	2·30	1·65	2·25
Fodder corn	12·62	10·00	7·00	10·10	11·50	11·50	9·85	11·00	10·25
Alfalfa	3·52	2·88	2·58	3·25	3·00	3·00	3·70	3·00	3·25

Grain Yields of the Prairie Provinces.—The total yields in the three Prairie Provinces (Manitoba, Saskatchewan and Alberta) are finally estimated as follows: wheat 375,194,000 bushels from 21,223,448 acres, as compared with 280,098,000 bushels from 22,181,329 acres in 1921; oats 289,660,000 bushels from 8,564,212 acres, as compared with 284,147,500 bushels from 10,819,641 acres in 1921; barley 53,612,000 bushels from 1,983,292 acres, as compared with 44,681,600 bushels from 2,109,065 acres in 1921; rye 29,429,000 bushels from 1,926,117 acres, as compared with 19,109,700 bushels from 1,688,228 acres in 1921; and flaxseed 4,901,700 bushels from 555,043 acres, as compared with 3,945,700 bushels from 516,972 acres in 1921.

3.—Areas and Yields of Wheat, Oats, Barley, Rye and Flaxseed in the three Prairie Provinces, 1920-22.

Provinces.	1920.	1921.	1922.	1920.	1921.	1922
	acres.	acres.	acres.	bush.	bush.	bush.
Prairie Provinces—						
Wheat	16,841,174	22,181,329	21,223,448	234,138,300	280,098,000	375,194,000
Oats	10,070,476	10,819,641	8,564,212	314,297,000	284,147,500	289,660,000
Barley	1,838,791	2,109,065	1,983,292	40,760,500	44,681,600	53,612,000
Rye	482,011	1,688,228	1,926,117	8,273,600	19,109,700	29,429,000
Flaxseed	1,391,076	516,972	555,043	7,588,800	3,945,700	4,901,700
Manitoba—						
Wheat	2,705,622	3,501,217	3,125,556	37,542,000	39,054,000	60,051,000
Oats	1,873,954	2,226,376	1,851,608	57,657,000	49,442,500	74,433,000
Barley	839,078	1,043,144	968,783	17,520,000	19,681,600	28,863,000
Rye	148,602	257,793	421,603	2,318,600	3,564,700	7,078,000
Flaxseed	146,455	61,689	66,680	1,157,800	544,700	734,000
Saskatchewan—						
Wheat	10,061,069	13,556,708	12,332,297	113,135,300	188,000,000	250,167,000
Oats	5,106,822	5,681,522	5,098,104	141,549,000	170,513,000	179,708,000
Barley	519,014	497,730	636,456	10,501,500	13,343,000	18,511,000
Rye	172,449	1,208,299	900,931	2,535,000	13,546,000	16,164,000
Flaxseed	1,140,921	426,849	466,177	5,705,000	3,230,000	4,079,000
Alberta—						
Wheat	4,074,483	5,123,404	5,765,595	83,461,000	53,044,000	64,976,000
Oats	3,089,700	2,911,743	1,614,500	115,091,000	64,192,000	35,519,000
Barley	480,699	568,191	378,053	12,739,000	11,657,000	6,238,000
Rye	160,960	222,136	603,583	3,420,000	1,999,000	6,187,000
Flaxseed	103,700	28,434	22,186	726,000	171,000	88,700

4.—Total Areas and Values of Field Crops in Canada, 1917-22.

AREAS.

Provinces.	1917.	1918.	1919.	1920.	1921.	1922.
	acres.	acres.	acres.	acres.	acres.	acres.
Canada	**42,602,288**	**51,427,190**	**53,049,640**	**52,830,865**	**59,635,346**	**57,189,681**
P. E. Island	491,210	488,180	526,628	536,105	552,184	543,069
Nova Scotia	752,980	910,387	1,011,144	919,547	807,858	789,096
New Brunswick	888,125	1,188,200	1,335,118	1,253,834	1,171,305	1,205,817
Quebec	5,778,139	8,201,362	7,973,021	7,905,987	8,051,989	7,435,300
Ontario	8,233,500	10,000,063	9,915,884	10,108,272	10,075,073	10,258,613
Manitoba	4,837,660	6,325,150	6,344,318	6,020,310	7,421,786	6,747,240
Saskatchewan	14,678,042	16,332,872	17,430,554	17,347,901	21,774,483	19,833,167
Alberta	6,692,616	7,739,391	8,170,971	8,389,521	9,417,870	10,005,623
British Columbia	250,016	241,585	342,002	349,388	362,798	371,756

VALUES.

	$	$	$	$	$	$
Canada	**1,144,636,450**	**1,372,935,970**	**1,537,170,100**	**1,455,244,050**	**931,863,670**	**962,293,200**
P. E. Island	16,530,000	16,277,800	22,367,400	18,530,400	14,202,970	10,889,800
Nova Scotia	23,313,400	42,486,200	63,357,000	47,846,550	29,556,400	24,140,400
New Brunswick	24,404,200	42,891,270	53,134,400	46,357,300	38,325,400	31,979,000
Quebec	153,197,900	276,776,900	309,963,000	330,251,000	219,154,000	165,159,600
Ontario	251,095,100	384,013,900	383,573,900	375,746,900	239,627,400	222,599,400
Manitoba	137,470,750	180,507,500	182,097,200	133,989,900	72,135,500	98,078,000
Saskatchewan	349,488,200	299,362,100	340,029,800	271,213,000	215,635,000	296,227,200
Alberta	176,965,800	113,072,700	158,044,400	204,291,500	82,780,000	94,946,800
British Columbia	12,171,100	17,547,600	24,603,000	27,017,500	20,447,000	18,273,000

In Table 5 is given a comparison of the quantity and value of the 1922 and 1921 crops. Taking the field crops as a whole, the total value in 1922 is greater than in 1921 by 3·3 p.c., the increase being caused by larger quantities to the extent of 20·4 p.c., offset by lower prices to the extent of 17·1 p.c.

5.—Field Crops of Canada, compared as to Quantity and Value, for 1921 and 1922.

("000" omitted).

Field Crops.	Actual Value, 1922.	Value at prices of 1921.	Actual Value, 1921.	Increase (+) or decrease (−).	Due to higher (+) or lower (−) prices.	Due to larger (+) or smaller (−) quantities.
	$	$	$	$	$	$
Fall wheat	19,059	19,335	15,846	+ 3,213	− 276	+ 3,489
Spring wheat	320,360	304,664	227,090	+ 93,270	+ 15,696	+ 77,574
All wheat	339,419	323,999	242,936	+ 96,483	+ 15,420	+ 81,063
Oats	185,455	167,021	146,395	+ 39,060	+ 18,434	+ 20,626
Barley	33,335	33,777	28,254	+ 5,081	− 442	+ 5,523
Rye	18,703	23,309	15,399	+ 3,304	− 4,606	+ 7,910
Peas	6,141	6,720	5,439	+ 702	− 579	+ 1,281
Beans	3,714	3,780	3,156	+ 558	− 66	+ 624
Buckwheat	8,140	8,634	7,285	+ 855	− 494	+ 1,349
Mixed grains	16,501	17,179	13,902	+ 2,599	− 678	+ 3,277
Flaxseed	8,639	7,212	5,938	+ 2,701	+ 1,427	+ 1,274
Corn for husking	11,510	11,452	12,317	− 807	+ 58	− 865
Potatoes	50,320	71,354	82,148	− 31,828	− 21,034	− 10,794
Turnips, etc	23,886	29,462	26,620	− 2,734	− 5,576	+ 2,842
Hay and clover	194,950	341,342	267,764	− 72,814	−146,392	+ 73,578
Grain hay	20,910	18,239	14,476	+ 6,434	+ 2,671	+ 3,763
Alfalfa	10,295	16,088	13,211	− 2,916	− 5,793	+ 2,877
Fodder corn	29,198	41,447	44,881	− 15,683	− 12,249	− 3,434
Sugar beets	1,500	1,238	1,742	− 242	+ 262	− 504
Totals	**962,616**	**1,122,253**	**931,863**	**+ 30,753**	**−159,637**	**+ 190,390**
				p.c.	p.c.	p.c.
Increase or decrease	-	-	-	+ 3·3	− 17·1	+ 20·4

Quality of Grain Crops, 1913-1922.—Table 6 gives the average weight per measured bushel for each of the principal grain crops from 1913 to 1922, with the ten-year average for the period 1912-1921.

The table shows that in 1922 fall wheat, 59·91 lb., whilst superior to 1921 was slightly below the ten-year average of 60 lb. The weight was above the ten-year average for five and below it for six years. For spring wheat, 60·31 lb., the quality was better than in 1921, 58·10 lb., and also better than the average, 58·94 lb. The weight was above average for five years and below it for six years. For all wheat the weight in 1922, 60·24 lb., was higher than in 1921, 58·11 lb., and higher than the average 59·18 lb. It was above average in eight years and below it in three years. Oats, 35·68 lb., were above 1921, 32·97 lb., and above the average of 34·96 lb. They were above average in seven years and below in four years. Barley, with a weight in 1922 of 47·66 lb., was above 1921, 46·05 lb., and above average, 47·13 lb. It was above average in seven years and below average in four years. For the remaining crops the decennial averages were as follows, the number of times the average was exceeded being placed within brackets: peas 59·72 lb. (8); beans 59·60 lb. (7); buckwheat 47·69 lb. (5); mixed grains 44·47 lb. (7); flax 54·62 (8); corn for husking 55·95 lb. (6).

6.—Quality of Grain Crops as indicated by Average Weight per measured bushel, 1913-22.

Crop.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	Ten-year average, 1912–21.
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
Fall wheat	60·25	59·61	59·71	59·52	59·37	61·19	61·20	60·14	58·77	59·91	60·00
Spring wheat	60·37	59·46	60·31	56·51	59·48	58·69	58·53	59·07	58·10	60·31	58·94
All wheat	60·34	59·49	60·19	57·10	59·46	59·44	59·12	59·35	58·11	60·24	59·18
Oats	36·48	35·31	36·61	33·86	33·55	35·61	34·16	35·62	32·97	35·68	34·96
Barley	48·41	47·22	48·26	45·66	46·97	47·24	46·32	47·62	46·05	47·66	47·13
Rye	55·66	55·47	56·32	54·95	53·44	55·60	55·09	55·44	55·06	55·71	55·19
Peas	60·00	60·53	60·74	59·88	59·81	59·93	59·60	60·44	59·42	60·08	59·72
Beans	59·70	60·21	59·61	60·00	59·70	58·67	59·99	59·73	59·30	59·39	59·60
Buckwheat	50·32	48·20	48·02	46·35	46·49	47·41	47·23	47·95	47·35	47·80	47·69
Mixed grains	44·74	45·51	44·98	43·13	44·41	46·39	44·83	44·65	41·62	44·33	44·47
Flaxseed	55·79	52·49	55·28	54·99	54·73	53·72	55·14	54·79	54·34	55·04	54·62
Corn for husking	56·27	56·62	56·32	56·51	56·18	53·97	–	56·45	55·56	55·45	55·95

Average Values of Farm Land.—The average value of the occupied farm lands of Canada, which includes both improved and unimproved land, together with dwelling houses, barns, stables and other farm buildings, is shown in Table 7 to have been $40 per acre in 1922, as compared with $40 in 1921, $48 in 1920, $46 in 1919, $41 in 1918, $38 in 1917, $36 in 1916 and $35 in 1915. By provinces, the value for 1922 is highest in British Columbia, viz., $120. In the other provinces the average values of farm lands per acre are reported as follows for 1922: Ontario $64; Quebec $58; Prince Edward Island $45; Nova Scotia $34; New Brunswick and Manitoba $32; Saskatchewan $28 and Alberta $24. The average values in 1922 of orchard and fruit lands, including buildings, etc., in the fruit growing districts of Nova Scotia, Ontario and British Columbia are estimated as follows: Nova Scotia $93 ($117); Ontario $127 ($137); British Columbia $320 ($300). The figures within brackets represent the averages for 1921.

7.—Average Values per acre of Occupied Farm Lands in Canada, as estimated by Crop Correspondents, 1908-10, 1914-22.

Provinces.	1908.	1909.	1910.	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
	$	$	$	$	$	$	$	$	$	$	$	$
Canada	**31**	**32**	**33**	**37**	**35**	**36**	**38**	**41**	**46**	**48**	**40**	**40**
P. E. Island	34	32	31	39	38	39	44	44	51	49	46	45
Nova Scotia	25	31	25	28	28	34	34	36	41	43	35	34
New Brunswick	21	24	19	26	22	29	29	35	32	35	28	32
Quebec	42	43	43	47	51	52	53	57	72	70	59	58
Ontario	47	50	48	54	52	53	55	57	66	70	63	64
Manitoba	27	29	29	32	30	32	31	32	35	39	35	32
Saskatchewan	20	22	22	24	24	23	26	23	32	32	29	28
Alberta	18	20	24	21	23	22	27	28	29	32	28	24
British Columbia	76	73	74	150	125	119	149	149	174	175	122	120

Orchard and Fruit Lands, 1922: Nova Scotia, $93 ($117 in 1921); Ontario, $127 ($137 in 1921); British Columbia, $320 ($300 in 1921).

2.—Farm Live Stock and Poultry.

Numbers of Farm Animals.—In Table 8 are given by provinces the numbers of each description of farm live stock in Canada for the year 1922, as compared with 1921, according to estimates made jointly by the statistical authorities of the Dominion and Provincial Governments.[1] The total number of horses in Canada on June 15, 1922, was estimated at 3,648,871, as compared with 3,813,921 in 1921. Mules numbered 9,202, as against 10,424; milch cows 3,745,804, as against 3,737,832; other cattle 5,974,065, as against 6,469,273; total cattle 9,719,869, as against 10,207,105; sheep 3,263,525, as against 3,675,857; swine 3,915,684, as against 3,854,895 and poultry (all descriptions) 42,930,562, as against 37,185,793. All descriptions of farm live stock show, therefore, a decrease as compared with 1921, excepting milch cows and swine, both of which have slightly increased. The decrease is most marked in the case of sheep, which have declined in number by 412,332 since 1921 and by 457,258 since 1920. By provinces, horses have increased only in Prince Edward Island, New Brunswick and British Columbia. Milch cows have increased in all provinces, except Prince Edward Island, Quebec and Alberta, which show a decrease. Total cattle show increases in Prince Edward Island, New Brunswick, Saskatchewan and British Columbia, but decreases in the other provinces. Sheep have declined in all provinces, except Nova Scotia and Saskatchewan, the decrease being most marked in Alberta, where the number has fallen from 523,599 to 260,366. Swine show a decrease in all the eastern provinces, but an increase in the Prairie Provinces and in British Columbia. Poultry have increased in all the provinces, except Manitoba and Saskatchewan.

[1] Statistics of the number and value of the various descriptions of farm live stock, collected at the decennial censuses since 1871, will be found in the "Statistical Summary of the Progress of Canada," immediately following the Table of Contents.

8.—Numbers of Farm Live Stock in Canada, by Provinces, 1921-1922.

Classification.—HORSES: Stallions, Mares and Geldings, 2 years old and over: Colts and Fillies, under 2 years. CATTLE: Bulls for breeding; Milch Cows; Calves, under 1 year; Steers, 2 years old and over; All other cattle.

Provinces.	1921.	1922.
	No.	No.
Canada—		
Horses—		
Stallions	42,811	46,682
Mares	1,746,580	1,689,519
Geldings	1,545,002	1,514,159
Colts and fillies	479,528	398,511
Total	3,813,921	3,648,871
Mules	10,424	9,202
Cattle—		
Bulls	285,372	278,570
Milch cows	3,737,832	3,745,804
Calves	2,321,732	2,170,152
Steers	881,123	803,900
Other cattle	2,981,046	2,721,443
Total	10,207,105	9,719,869
Sheep	3,675,857	3,263,525
Swine	3,854,895	3,915,684
Poultry—		
Hens	34,340,474	39,434,873
Turkeys	1,199,494	1,590,781
Geese	883,690	947,269
Ducks	762,135	958,139
Total	37,185,793	42,930,562
Rabbits (British Columbia only)	65,789	51,623
P. E. Island—		
Horses—		
Stallions	88	67
Mares	14,515	16,875
Geldings	13,110	12,622
Colts and fillies	3,568	3,266
Total	31,311	32,830
Cattle—		
Bulls	3,195	2,744
Milch cows	55,022	51,613
Calves	29,878	24,062
Steers	7,043	5,544
Other cattle	43,057	59,979
Total	138,195	143,942
Sheep	131,763	105,703
Swine	42,447	37,351
Poultry—		
Hens	647,088	781,745
Turkeys	4,153	12,751
Geese	27,069	34,882
Ducks	11,133	16,295
Total	689,443	845,673

Provinces.	1921.	1922.
	No.	No.
Nova Scotia—		
Horses—		
Stallions	974	1,124
Mares	32,555	31,599
Geldings	24,603	23,425
Colts and fillies	3,189	2,766
Total	61,321	58,914
Cattle—		
Bulls	5,065	4,750
Milch cows	143,780	144,937
Calves	68,137	59,486
Steers	38,080	34,589
Other cattle	78,230	75,940
Total	333,292	319,702
Sheep	324,260	329,345
Swine	52,064	47,504
Poultry—		
Hens	708,753	910,205
Turkeys	7,853	9,519
Geese	13,460	17,311
Ducks	10,678	12,770
Total	740,744	949,805
New Brunswick—		
Horses—		
Stallions	3,011	3,324
Mares	34,702	35,810
Geldings	28,093	27,307
Colts and fillies	4,152	3,711
Total	69,958	70,152
Cattle—		
Bulls	9,954	9,440
Milch cows	139,055	146,054
Calves	58,845	61,874
Steers	22,877	25,934
Other cattle	64,715	59,813
Total	295,446	303,115
Sheep	236,951	236,031
Swine	89,337	85,260
Poultry—		
Hens	679,542	1,168,619
Turkeys	29,452	44,282
Geese	22,585	25,057
Ducks	11,826	13,538
Total	743,405	1,251,496
Quebec—		
Horses—		
Stallions	7,264	7,883
Mares	197,546	177,308
Geldings	167,173	155,423
Colts and fillies	34,976	27,976
Total	406,959	368,590

8.—Numbers of Farm Live Stock in Canada, by Provinces, 1921-1922—con.

Provinces.	1921.	1922.
	No.	No.
Quebec—concluded		
Cattle—		
Bulls	105,041	99,924
Milch cows	1,040,389	1,006,992
Calves	441,701	384,561
Steers	66,533	49,248
Other cattle	399,730	317,665
Total	2,053,394	1,858,390
Sheep	1,006,617	990,918
Swine	833,920	728,926
Poultry—		
Hens	3,476,729	6,117,723
Turkeys	146,004	206,659
Geese	129,864	125,247
Ducks	80,618	68,673
Total	3,833,215	6,518,302
Ontario—		
Horses—		
Stallions	3,665	3,569
Mares	353,075	350,998
Geldings	272,087	272,442
Colts and fillies	65,410	58,843
Total	694,237	685,852
Cattle—		
Bulls	67,759	69,077
Milch cows	1,201,270	1,235,665
Calves	651,532	626,353
Steers	249,099	234,049
Other cattle	717,453	671,037
Total	2,890,113	2,836,181
Sheep	1,081,828	986,617
Swine	1,563,807	1,553,434
Poultry—		
Hens	10,389,852	12,740,844
Turkeys	291,377	336,447
Geese	413,219	446,487
Ducks	363,758	440,539
Total	11,458,206	13,964,317
Manitoba—		
Horses—		
Stallions	1,500	5,020
Mares	191,159	173,590
Geldings	173,433	154,389
Colts and fillies	53,697	41,633
Total	419,789	374,632
Cattle—		
Bulls	20,493	17,708
Milch cows	251,799	252,245
Calves	191,979	173,324
Steers	83,567	75,810
Other cattle	269,921	221,653
Total	817,759	740,740
Sheep	131,361	112,863

Provinces.	1921.	1922.
	No.	No.
Manitoba—concluded		
Swine	224,704	235,214
Poultry—		
Hens	3,449,598	3,250,990
Turkeys	172,830	210,709
Geese	72,847	73,833
Ducks	61,015	76,576
Total	3,756,290	3,612,108
Saskatchewan—		
Horses—		
Stallions	13,612	13,892
Mares	505,905	508,416
Geldings	487,813	489,162
Colts and fillies	161,948	132,032
Total	1,169,278	1,143,502
Mules	10,111	8,907
Cattle—		
Bulls	32,405	33,423
Milch cows	421,706	456,006
Calves	389,126	398,240
Steers	167,478	173,668
Other cattle	552,617	541,449
Total	1,563,332	1,602,786
Sheep	188,021	191,937
Swine	432,776	563,069
Poultry—		
Hens	9,051,788	7,705,102
Turkeys	255,923	419,063
Geese	109,365	121,530
Ducks	136,933	210,255
Total	9,554,009	8,455,950
Alberta—		
Horses—		
Stallions	11,848	11,009
Mares	398,015	372,655
Geldings	360,362	358,069
Colts and fillies	146,285	121,583
Total	916,510	863,316
Cattle—		
Bulls	36,964	36,294
Milch cows	423,838	392,037
Calves	441,806	393,502
Steers	246,446	205,058
Other cattle	705,148	626,151
Total	1,854,202	1,653,042
Sheep	523,599	760,366
Swine	574,318	623,188
Poultry—		
Hens	4,534,042	4,908,543
Turkeys	283,346	337,336
Geese	83,363	89,724
Ducks	62,814	86,536
Total	4,963,565	5,422,139

8.—Numbers of Farm Live Stock in Canada, by Provinces, 1921-1922—concluded.

Provinces.	1921.	1922.	Provinces.	1921.	1922.
	No.	No.		No.	No.
British Columbia—			**British Columbia—con.**		
Horses—			Sheep	51,457	49,745
Stallions	849	794			
Mares	19,108	22,268			
Geldings	18,298	21,320	Swine	41,522	41,738
Colts and fillies	6,303	6,701			
Total	44,558	51,083	Poultry—		
			Hens	1,403,082	1,851,102
Mules	313	295	Turkeys	8,556	13,515
			Geese	11,918	13,198
Cattle—			Ducks	23,360	32,957
Bulls	4,496	5,210			
Milch cows	57,973	60,255	Total	1,446,916	1,910,772
Calves	48,728	48,750			
Steers	–	–			
Other cattle	150,175	147,756	Rabbits	65,789	51,623
Total	261,372	261,971			

In Table 9 are given in summary form the numbers of farm live stock for Canada and by provinces for the years 1917-22. For numbers of live stock for various years back to 1871, see the "Statistical Summary of the Progress of Canada," immediately following the Table of Contents.

9.—Estimated Numbers of Farm Live Stock in Canada, 1917-22.

Live stock.	1917.	1918.	1919.	1920.	1921.	1922.
	No.	No.	No.	No.	No.	No.
Canada—						
Horses	3,412,749	3,609,257	3,667,369	3,400,352	3,813,921	3,648,871
Milch cows	3,202,283	3,538,600	3,548,437	3,504,692	3,737,832	3,745,804
Other cattle	4,718,657	6,507,267	6,536,574	6,067,504	6,469,273	5,974,065
Total cattle	7,920,940	10,045,867	10,085,011	9,572,196	10,207,105	9,719,869
Sheep	2,369,358	3,052,748	3,421,958	3,720,783	3,675,857	3,263,525
Swine	3,619,382	4,289,682	4,040,070	3,516,587	3,854,895	3,915,684
Prince Edward Island—						
Horses	38,948	32,620	34,576	35,569	31,311	32,830
Milch cows	46,032	41,429	45,662	49,932	55,022	51,613
Other cattle	54,970	69,092	79,815	89,211	83,173	92,329
Total cattle	101,002	110,521	125,477	139,143	138,195	143,942
Sheep	90,573	73,046	114,955	128,529	131,763	105,703
Swine	35,236	40,814	49,510	49,917	42,447	37,351
Nova Scotia—						
Horses	64,193	70,101	69,589	67,583	61,321	58,914
Milch cows	131,442	157,829	162,230	170,308	143,780	144,937
Other cattle	135,046	249,422	243,831	228,153	189,512	174,765
Total cattle	266,488	407,251	406,061	398,461	333,292	319,702
Sheep	200,979	259,847	261,529	403,567	324,260	339,345
Swine	49,850	68,238	69,982	57,950	52,064	47,504
New Brunswick—						
Horses	65,169	66,590	77,828	76,737	69,958	70,152
Milch cows	100,221	120,123	153,058	147,760	139,055	146,054
Other cattle	89,456	166,624	211,964	185,228	156,391	157,061
Total cattle	189,677	286,747	365,022	332,988	295,446	303,115
Sheep	103,877	140,015	212,745	280,090	236,951	236,031
Swine	69,269	79,814	104,939	92,925	89,337	85,260
Quebec—						
Horses	379,276	496,811	463,902	433,199	406,959	368,590
Milch cows	911,023	1,163,865	1,056,347	1,030,809	1,040,389	1,006,992
Other cattle	958,010	1,245,819	1,213,297	1,101,403	1,013,005	851,398
Total cattle	1,869,033	2,409,684	2,269,644	2,132,212	2,053,394	1,858,390
Sheep	849,148	959,070	1,007,425	1,031,982	1,006,617	990,918
Swine	712,087	997,255	935,425	836,431	833,920	728,926

9.—Estimated Numbers of Farm Live Stock in Canada, 1917-22—concluded.

Live stock.	1917.	1918.	1919.	1920.	1921.	1922.
	No.	No.	No.	No.	No.	No.
Ontario—						
Horses	887,246	732,977	719,569	704,640	694,237	685,852
Milch cows	1,082,119	1,097,039	1,141,016	1,170,010	1,204,270	1,235,665
Other cattle	865,947	1,770,683	1,786,175	1,711,817	1,685,843	1,600,516
Total cattle	1,947,966	2,867,722	2,927,191	2,881,827	2,890,113	2,836,181
Sheep	595,477	972,341	1,101,740	1,129,084	1,081,828	986,617
Swine	1,236,064	1,656,386	1,695,487	1,614,356	1,563,807	1,553,434
Manitoba—						
Horses	324,175	384,772	379,356	356,628	419,789	374,632
Milch cows	202,177	225,659	227,872	221,785	251,799	252,245
Other cattle	357,870	521,240	553,899	536,189	565,960	488,495
Total cattle	560,047	746,899	781,771	757,974	817,759	740,740
Sheep	80,588	136,782	167,170	156,716	131,361	112,863
Swine	175,013	284,596	261,542	212,542	224,704	235,214
Saskatchewan—						
Horses	880,301	990,009	1,078,452	939,805	1,169,278	1,143,502
Milch cows	354,430	352,989	374,062	354,507	421,706	456,006
Other cattle	856,687	926,342	1,005,501	969,555	1,141,626	1,146,780
Total cattle	1,211,090	1,279,331	1,379,563	1,324,062	1,563,332	1,602,786
Sheep	127,892	134,177	146,911	160,918	188,021	191,937
Swine	573,938	521,240	432,367	321,900	432,776	563,069
Alberta—						
Horses	718,317	791,246	800,380	741,851	916,510	863,316
Milch cows	325,861	328,702	336,596	305,607	423,838	392,037
Other cattle	1,209,433	1,362,880	1,247,448	1,050,334	1,430,364	1,261,005
Total cattle	1,535,294	1,691,582	1,584,044	1,355,941	1,854,202	1,653,042
Sheep	276,966	332,179	364,498	383,424	523,599	260,366
Swine	730,237	601,534	445,858	286,556	574,318	623,188
British Columbia—						
Horses	55,124	44,131	43,717	44,070	44,558	51,083
Milch cows	49,005	50,965	51,594	53,974	57,973	60,255
Other cattle	191,338	195,165	194,644	195,614	203,399	201,716
Total cattle	240,343	246,130	246,238	249,588	261,372	261,971
Sheep	43,558	45,291	44,985	46,473	51,457	49,745
Swine	37,688	39,865	44,960	44,010	41,522	41,738

Values of Farm Live Stock and of Wool.—The average values for horses and cattle in 1922 (Tables **10** and **11**) showed a further fall, as compared with the extraordinary drop reported in 1921, as compared with 1920. With exceptions in one or two of the eastern provinces, the fall was general, but was most accentuated in the Prairie Provinces. Only in the case of sheep and swine was there some small recovery. For Canada as a whole, horses under one year averaged $34, as against $38 in 1921; horses one year to under three years $70, against $79; and horses three years old and over $111, against $123. Cattle under one year were $11, against $12; cattle one year to under three years $25, against $26; cattle three years old and over $38, against $39. For all descriptions the average value per head for Canada was as follows: horses $72, as against $83 in 1921; milch cows $48, against $51; other cattle $26, against $28; all cattle $35, against $37; sheep $8 against $6, and swine $15, against $14. For swine per 100 lb. live weight the average is $10, the same as in 1921.

The price of wool shows some increase, as compared with the low record of 1921, the average prices in 1922 for Canada being 17 cents per lb. unwashed, and 24 cents per lb. washed, as against 14 and 22 cents respectively in 1921.

Applying the average values per head to the numbers as returned in June last, it is possible to calculate approximately, as is done in Table **12**, the total value of farm live stock in Canada for the year 1922, as compared with 1921, in brackets, as follows: Horses $264,043,000 ($314,764,000); milch cows $179,141,000 ($190,-

203,000); other cattle $156,441,000 ($183,647,000); all cattle $335,582,000 ($373,-850,000); sheep $24,962,000 ($23,308,000); swine $57,300,000 ($54,042,000). Thus, the estimated total value of these descriptions of farm live stock amounted to $681,887,000, as compared with $765,964,000 in 1921, $1,046,717,000 in 1920 and $903,686,000 in 1916.

10.—Average Values of Farm Animals and of Wool, as estimated by Crop Correspondents, 1916-22.

Provinces.		Horses.			Milch cows.	Other horned cattle.			Swine per 100 lb. live weight.	Sheep.	Wool per lb.	
		Under 1 year.	1 year to under 3 years.	3 years and over.		Under 1 year.	1 year to under 3 years.	3 years and over.			Unwashed.	Washed.
		$	$	$	$	$	$	$	$	$	$	$
Canada	1916	54	109	160	70	20	43	63	12	10	0·37	0·50
	1917	57	116	167	84	24	52	77	17	15	0·59	0·75
	1918	56	112	162	87	25	57	88	16	16	0·62	0·80
	1919	55	108	161	92	25	56	83	16	15	0·55	0·70
	1920	49	102	151	80	20	45	67	15	10	0·22	0·32
	1921	38	79	123	51	12	26	39	10	6	0·14	0·22
	1922	34	70	111	48	11	25	38	10	8	0·17	0·24
P. E. Island	1916	37	76	112	52	14	31	46	12	9	0·37	0·47
	1917	41	79	118	63	17	37	54	17	14	0·60	0·76
	1918	43	86	131	71	17	38	60	16	15	0·65	0·83
	1919	53	97	146	83	20	48	72	16	14	0·46	0·59
	1920	45	93	141	60	14	31	47	13	8	0·19	0·26
	1921	35	74	112	38	9	20	30	9	5	0·13	0·19
	1922	39	76	119	47	10	23	35	10	7	0·17	0·21
Nova Scotia	1916	50	99	150	53	13	33	54	11	7	0·39	0·49
	1917	49	101	149	63	18	41	63	17	9	0·61	0·74
	1918	51	100	152	65	15	40	62	17	10	0·71	0·88
	1919	55	109	167	76	17	46	75	18	11	0·62	0·76
	1920	51	107	157	71	16	40	66	16	8	0·21	0·29
	1921	41	88	134	44	10	24	41	11	4	0·15	0·20
	1922	40	82	133	45	10	23	40	11	6	0·18	0·23
New Brunswick	1916	55	113	169	48	13	28	44	12	6	0·36	0·48
	1917	54	118	165	63	16	37	55	16	10	0·59	0·74
	1918	60	125	175	65	18	38	58	17	12	0·71	0·89
	1919	62	125	204	70	17	41	58	17	11	0·57	0·73
	1920	58	120	176	61	15	35	53	15	8	0·21	0·32
	1921	43	96	151	40	10	23	33	10	5	0·13	0·19
	1922	46	99	155	40	11	25	36	11	6	0·19	0·26
Quebec	1916	49	105	155	62	16	35	52	14	11	0·44	0·58
	1917	53	117	171	81	19	43	67	20	15	0·65	0·83
	1918	53	114	171	79	18	40	62	17	14	0·63	0·83
	1919	55	120	179	84	19	42	64	17	13	0·57	0·76
	1920	50	111	169	75	16	35	54	17	10	0·29	0·42
	1921	36	85	136	46	9	21	33	11	6	0·21	0·31
	1922	38	85	135	45	10	22	35	12	8	0·21	0·32
Ontario	1916	52	105	151	76	23	51	71	12	13	0·34	0·44
	1917	55	105	147	92	29	63	90	17	18	0·55	0·66
	1918	54	105	146	96	29	65	94	17	20	0·61	0·76
	1919	53	101	144	107	29	64	95	17	18	0·54	0·67
	1920	52	100	143	92	25	55	82	16	12	0·18	0·25
	1921	48	88	126	59	13	32	47	10	8	0·10	0·15
	1922	43	82	121	58	16	33	48	10	9	0·15	0·19
Manitoba	1916	61	123	171	74	21	47	67	11	12	0·31	0·37
	1917	63	127	178	88	27	55	83	16	16	0·51	0·55
	1918	65	126	182	91	28	65	93	16	17	0·56	0·67
	1919	59	117	172	90	26	59	85	16	15	0·54	0·61
	1920	50	104	154	71	18	43	65	14	9	0·17	0·23
	1921	37	75	117	45	10	21	31	9	6	0·09	0·14
	1922	33	71	110	42	10	23	34	8	7	0·13	0·17

10.—Average Values of Farm Animals and of Wool, as estimated by Crop Correspondents, 1916-22—concluded.

Provinces.		Horses.			Milch cows.	Other horned cattle.			Swine per 100 lb. live weight.	Sheep.	Wool per lb.	
		Under 1 year.	1 year to under 3 years.	3 years and over.		Under 1 year.	1 year to under 3 years.	3 years and over.			Unwashed.	Washed
		$	$	$	$	$	$	$	$	$	$	$
Saskatchewan	1916	65	133	188	73	22	47	67	10	10	0·28	0·33
	1917	69	137	194	85	27	58	83	15	14	0·50	0·54
	1918	64	134	190	91	30	64	92	15	17	0·56	0·71
	1919	56	108	162	91	27	60	86	16	15	0·51	0·62
	1920	46	97	149	73	19	45	66	13	8	0·19	0·28
	1921	31	71	118	49	11	27	40	9	6	0·12	0·15
	1922	25	55	93	40	9	22	33	8	7	0·16	0·20
Alberta	1916	51	102	151	77	27	51	73	11	10	0·28	0·37
	1917	55	109	161	89	33	62	87	16	15	0·51	0·55
	1918	48	96	142	93	32	64	95	15	15	0·57	0·69
	1919	40	82	125	89	26	57	83	16	14	0·52	0·64
	1920	32	72	114	71	20	45	64	14	10	0·18	0·22
	1921	20	46	65	48	10	25	37	9	6	0·12	0·20
	1922	14	32	60	38	8	19	30	9	7	0·15	0·23
British Columbia	1916	48	87	144	90	24	48	72	13	11	0·29	0·45
	1917	50	101	155	103	29	62	89	17	14	0·46	0·52
	1918	52	98	150	106	29	65	93	15	15	0·54	0·64
	1919	63	110	167	118	35	70	102	19	16	0·49	0·58
	1920	50	103	162	125	30	68	95	19	11	0·17	0·39
	1921	33	75	138	85	18	40	58	12	8	0·08	0·12
	1922	25	54	105	69	13	30	46	11	9	0·17	0·25

NOTE.—See paragraph relating to production and value of wool on page 292.

11.—Average Values per head of Farm Live Stock in Canada, as estimated by Crop Correspondents, 1916-22.

Farm Animals.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
	$	$	$	$	$	$	$
Canada—							
Horses	129	126	127	119	106	83	72
Milch cows	70	86	87	92	79	51	48
Other cattle	54	57	61	58	47	28	26
Total cattle	61	69	70	70	59	37	35
Sheep	10	15	16	15	10	6	8
Swine	18	26	26	25	23	14	15
Prince Edward Island—							
Horses	87	88	103	114	109	84	92
Milch cows	52	64	71	83	60	38	48
Other cattle	35	38	44	53	34	21	26
Total cattle	42	50	54	64	43	28	34
Sheep	9	14	15	14	8	5	7
Swine	20	27	29	27	24	16	19
Nova Scotia—							
Horses	108	111	117	127	119	98	95
Milch cows	53	63	65	76	71	44	45
Other cattle	38	45	44	54	43	27	26
Total cattle	45	54	53	63	55	34	35
Sheep	7	9	10	11	8	4	6
Swine	18	29	30	29	24	18	18
New Brunswick—							
Horses	127	127	141	138	139	115	110
Milch cows	49	63	65	70	61	40	40
Other cattle	33	40	41	42	39	23	25
Total cattle	41	52	51	53	49	31	32
Sheep	7	10	12	11	8	5	6
Swine	17	27	28	31	22	17	17

11.—Average Values per head of Farm Live Stock in Canada, as estimated by Crop Correspondents, 1916-22—concluded.

Farm Animals.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
	$	$	$	$	$	$	$
Quebec—							
Horses	115	132	131	134	126	89	100
Milch cows	62	82	79	84	75	46	45
Other cattle	51	46	45	44	38	23	23
Total cattle	57	63	61	61	56	35	35
Sheep	11	15	14	13	10	6	8
Swine	17	29	26	24	26	16	19
Ontario—							
Horses	125	113	111	110	108	96	90
Milch cows	76	93	96	107	92	59	58
Other cattle	65	63	67	68	57	34	34
Total cattle	71	79	78	83	71	45	44
Sheep	13	19	20	18	12	8	9
Swine	18	25	27	25	23	13	14
Manitoba—							
Horses	128	138	141	131	114	89	84
Milch cows	74	88	91	90	71	45	42
Other cattle	51	57	64	58	44	23	25
Total cattle	59	69	73	67	52	30	31
Sheep	12	16	17	15	9	6	7
Swine	17	24	26	26	22	14	14
Saskatchewan—							
Horses	149	138	149	125	108	82	67
Milch cows	73	85	91	91	73	49	40
Other cattle	51	59	66	62	45	28	23
Total cattle	58	66	73	70	59	33	28
Sheep	10	14	17	15	8	6	7
Swine	17	25	28	26	20	14	13
Alberta—							
Horses	121	122	107	94	80	64	42
Milch cows	77	89	93	89	71	48	38
Other cattle	56	64	70	60	45	28	21
Total cattle	61	70	74	66	51	32	25
Sheep	10	15	15	14	10	6	7
Swine	17	24	24	25	18	13	12
British Columbia—							
Horses	108	118	123	129	126	100	78
Milch cows	94	103	106	118	125	85	69
Other cattle	55	65	67	71	72	40	33
Total cattle	66	73	75	81	83	50	41
Sheep	11	14	15	16	11	8	9
Swine	19	21	24	28	21	17	16

12.—Estimated Total Values of Farm Live Stock in Canada, by Provinces, 1916-22.

Province and Year.	Horses.	Milch cows.	All Cattle.	Sheep.	Swine.	Total.
	$	$	$	$	$	$
Canada.....1916	418,686,000	198,896,000	403,373,000	20,927,000	60,700,000	903,686,000
1917	429,123,000	274,081,000	544,676,000	35,576,000	92,886,000	1,102,261,000
1918	459,155,000	307,244,000	706,058,000	48,802,000	112,751,000	1,326,766,000
1919	435,070,000	327,814,000	708,821,000	50,402,000	102,309,000	1,296,602,000
1920	361,328,000	278,432,000	566,973,000	37,263,000	81,153,000	1,046,717,000
1921	314,764,000	190,203,000	373,850,000	23,308,000	54,042,000	765,964,000
1922	264,043,000	179,141,000	335,582,000	24,962,000	57,300,000	681,887,000
P. E. Island.....1916	3,355,000	2,394,000	4,369,000	799,000	766,000	9,289,000
1917	3,408,000	2,923,000	4,998,000	1,245,000	947,000	10,598,000
1918	3,353,000	2,922,000	5,930,000	1,081,000	1,183,000	11,547,000
1919	3,935,000	3,794,000	8,024,000	1,603,000	1,320,000	14,882,000
1920	3,880,000	2,975,000	5,991,000	1,073,000	1,205,000	12,149,000
1921	2,637,000	2,079,000	3,861,000	654,000	688,000	7,840,000
1922	3,011,000	2,482,000	4,857,000	779,000	726,000	9,373,000

12.—Estimated Total Value of Farm Live Stock in Canada, by Provinces, 1916-22—concluded.

Province and Year.	Horses.	Milch cows.	All Cattle.	Sheep.	Swine.	Total.
	$	$	$	$	$	$
Nova Scotia.....1916	6,933,000	6,897,000	12,172,000	1,366,000	935,000	21,346,000
1917	7,141,000	8,314,000	14,391,000	1,809,000	2,626,000	25,967,000
1918	8,194,000	10,337,000	21,383,000	1,433,000	2,020,000	33,030,000
1919	8,838,000	12,329,000	25,496,000	2,877,000	2,029,000	39,240,000
1920	8,066,000	12,033,000	21,927,000	3,260,000	1,395,000	34,648,000
1921	6,007,000	6,259,000	11,335,000	1,437,000	937,000	19,716,000
1922	5,588,000	6,575,000	11,145,000	2,003,000	862,000	19,598,000
New Brunswick.....1916	8,244,000	4,861,000	7,904,000	689,000	1,202,000	18,039,000
1917	8,244,000	6,314,000	9,848,000	1,039,000	1,853,000	20,984,000
1918	9,385,000	7,810,000	14,580,000	1,642,000	2,219,000	27,826,000
1919	10,776,000	10,640,000	19,510,000	2,449,000	3,291,000	36,026,000
1920	10,666,000	9,013,000	16,237,000	2,241,000	2,044,000	31,188,000
1921	8,045,000	5,562,000	9,159,000	1,185,000	1,519,000	19,908,000
1922	7,709,000	5,879,000	9,828,000	1,303,000	1,486,000	20,326,000
Quebec.....1916	38,252,000	39,668,000	66,720,000	5,226,000	9,032,000	119,230,000
1917	49,875,000	74,248,000	118,078,000	12,737,000	20,294,000	200,984,000
1918	65,082,000	91,945,000	148,007,000	13,427,000	25,929,000	252,445,000
1919	62,163,000	88,734,000	139,119,000	13,097,000	22,450,000	236,829,000
1920	55,583,000	77,311,000	119,164,000	10,320,000	21,747,000	206,814,000
1921	36,219,000	47,858,000	71,157,000	6,040,000	13,343,000	126,759,000
1922	37,023,000	45,162,000	64,813,000	7,587,000	13,664,000	123,087,000
Ontario.....1916	112,026,000	82,241,000	140,866,000	7,370,000	25,283,000	285,545,000
1917	100,259,000	100,096,000	154,428,000	11,016,000	31,211,000	296,914,000
1918	81,169,000	105,515,000	224,280,000	19,766,000	43,896,000	369,111,000
1919	79,153,000	121,623,000	242,895,000	19,831,000	42,387,000	384,266,000
1920	76,197,000	107,128,000	205,007,000	13,349,000	37,641,000	332,194,000
1921	66,349,000	71,250,000	128,767,000	8,249,000	20,659,000	224,024,000
1922	61,520,000	71,167,000	125,916,000	8,904,000	22,415,000	218,755,000
Manitoba.....1916	41,494,000	14,427,000	32,678,000	883,000	3,500,000	78,555,000
1917	44,574,000	17,842,000	38,330,000	1,289,000	4,157,000	88,350,000
1918	54,371,000	20,622,000	54,168,000	2,317,000	7,517,000	118,373,000
1919	49,523,000	20,609,000	52,684,000	2,518,000	7,185,000	111,910,000
1920	40,536,000	15,698,000	39,344,000	1,389,000	4,601,000	85,870,000
1921	37,305,000	11,378,000	24,508,000	783,000	3,039,000	65,635,000
1922	31,599,000	10,589,000	22,891,000	789,000	3,320,000	58,599,000
Saskatchewan.....1916	125,023,000	23,358,000	58,508,000	1,242,000	9,022,000	193,795,000
1917	121,482,000	30,213,000	80,329,000	1,822,000	14,492,000	218,125,000
1918	147,511,000	32,122,000	93,261,000	2,281,000	14,595,000	257,648,000
1919	139,867,000	34,046,000	96,381,000	2,204,000	11,242,000	249,634,000
1920	101,499,000	25,879,000	69,509,000	1,287,000	6,438,000	178,733,000
1921	95,463,000	20,577,000	52,239,000	1,200,000	5,963,000	154,865,000
1922	76,978,000	18,405,000	44,469,000	1,364,000	7,200,000	130,011,000
Alberta.....1916	73,737,000	21,354,000	70,789,000	2,926,000	10,260,000	157,712,000
1917	87,635,000	29,083,000	106,789,000	4,016,000	17,708,000	216,148,000
1918	84,662,000	30,569,000	125,971,000	4,983,000	14,437,000	230,053,000
1919	75,236,000	29,957,000	104,804,000	5,103,000	11,146,000	196,289,000
1920	59,348,000	21,698,000	68,963,000	3,833,000	5,158,000	137,302,000
1921	58,283,000	20,312,000	59,760,000	3,348,000	7,188,000	128,579,000
1922	36,630,000	14,724,000	40,848,000	1,785,000	7,168,000	86,431,000
British Columbia....1916	6,622,000	3,696,000	9,367,000	486,000	700,000	17,174,000
1917	6,505,000	5,048,000	17,485,000	603,000	791,000	25,384,000
1918	5,428,000	5,402,000	18,478,000	679,000	955,000	25,540,000
1919	5,639,000	6,088,000	19,908,000	720,000	1,259,000	27,526,000
1920	5,553,000	6,747,000	20,831,000	511,000	924,000	27,819,000
1921	4,456,000	4,928,000	13,064,000	412,000	706,000	18,638,000
1922	3,985,000	4,158,000	10,815,000	448,000	459,000	15,707,000

NOTE.—"Milch cows" are included in "All Cattle," so that the totals in the last column are obtained by adding "Horses," "All cattle," "Sheep" and "Swine."

Farm Poultry.—Table 13 gives the number and values of farm poultry in 1922, as compared with 1921, the values being estimated by application to the numbers of average values per head as reported by crop correspondents. The total estimated number of farm poultry has increased from 37,185,793 in 1921 to 42,930,562 in 1922.

For Canada as a whole the average values per head of each description of farm poultry were returned as follows: turkeys $3, as compared with $3.39 in 1921; geese $2.28, against $2.42; ducks $1.17, against $1.25; other fowls 84 cents, against 90 cents. The average values for 1922, multiplied by the numbers as returned in June last, give approximately the total values of farm poultry for all Canada as follows, the corresponding totals for 1921 being given within brackets: turkeys $4,822,800 ($4,069,300); geese $2,161,300 ($2,134,300); ducks $1,118,300 ($950,900); other fowls $33,092,900 ($30,860,600); total $41,195,300 ($38,015,100). The greater total value in 1922 was due to increase in the numbers returned.

13.—Estimated Numbers and Values of Farm Poultry in Canada, 1921-22.

Description.	1921.	1922.	1921.	1922.	1921.	1922.
	No.	No.	$ per head.	$ per head.	$	$
Canada—						
Turkeys	1,199,494	1,590,281	3·39	3·00	4,069,300	4,822,800
Geese	883,690	947,269	2·42	2·28	2,134,300	2,161,300
Ducks	762,135	953,139	1·25	1·17	950,900	1,118,300
Other fowls	34,340,474	39,434,873	0·90	0·84	30,860,600	33,092,900
Totals	37,185,793	42,930,562	–	–	38,015,100	41,195,300
P. E. Island—						
Turkeys	4,153	12,751	4·33	3·90	18,000	49,700
Geese	27,069	34,882	2·75	2·69	74,400	93,800
Ducks	11,133	16,295	1·39	1·28	15,500	20,900
Other fowls	647,088	781,745	0·89	0·83	575,900	648,800
Totals	689,443	845,673	–	–	683,800	813,200
Nova Scotia—						
Turkeys	7,853	9,519	3·98	3·52	31,300	33,500
Geese	13,460	17,311	2·83	2·66	38,000	46,000
Ducks	10,678	12,770	1·50	1·39	16,000	17,800
Other fowls	708,753	910,205	0·91	0·82	645,000	746,400
Totals	740,744	949,805	–	–	730,300	843,700
New Brunswick—						
Turkeys	29,452	44,282	4·24	4·55	124,900	201,500
Geese	22,585	25,057	2·92	2·87	65,900	71,900
Ducks	11,826	13,538	1·50	1·55	17,700	21,000
Other fowls	679,542	1,168,619	1·05	1·02	713,500	1,192,000
Totals	743,405	1,251,496	–	–	922,000	1,486,400
Quebec—						
Turkeys	146,004	206,659	3·62	3·66	528,500	756,400
Geese	129,864	125,247	2·31	2·43	300,000	304,400
Ducks	80,618	68,673	1·38	1·36	111,300	93,400
Other fowls	3,476,729	6,117,723	1·12	1·00	3,893,900	6,178,900
Totals	3,833,215	6,518,302	–	–	4,833,700	7,333,100
Ontario—						
Turkeys	291,377	336,447	4·18	3·77	1,217,000	1,268,400
Geese	413,219	446,487	2·48	2·37	1,024,800	1,058,200
Ducks	363,758	440,539	1·31	1·29	476,500	568,300
Other fowls	10,389,852	12,740,844	1·05	0·99	10,909,300	12,613,400
Totals	11,458,206	13,964,317	–	–	13,627,600	15,508,300

13.—Estimated Numbers and Values of Farm Poultry in Canada, 1921-22—concluded.

Description.	1921.	1922.	1921.	1922.	1921.	1922.
	No.	No.	$ per head.	$ per head.	$	$
Manitoba—						
Turkeys	172,830	210,709	3·25	2·46	561,700	518,300
Geese	72,847	73,833	2·20	1·91	160,300	141,000
Ducks	61,015	76,576	1·03	0·98	62,800	75,000
Other fowls	3,449,598	3,250,990	0·78	0·68	2,690,700	2,210,700
Totals	3,756,290	3,612,108	–	–	3,475,500	2,945,000
Saskatchewan—						
Turkeys	255,923	419,063	2·85	2·42	729,400	1,114,100
Geese	109,365	121,530	2·29	1·96	250,400	238,200
Ducks	136,933	210,255	1·07	0·94	146,500	197,600
Other fowls	9,051,788	7,705,102	0·70	0·61	6,336,300	4,700,100
Totals	9,554,009	8,455,950	–	–	7,462,600	6,250,000
Alberta—						
Turkeys	283,346	337,336	2·90	2·46	821,700	829,800
Geese	83,363	89,724	2·22	1·92	185,000	172,300
Ducks	62,814	86,536	1·13	0·96	71,000	83,100
Other fowls	4,534,042	4,908,543	0·70	0·59	3,173,800	2,896,000
Totals	4,963,565	5,422,139	–	–	4,251,500	3,981,200
British Columbia—						
Turkeys	8,556	13,515	4·30	3·78	36,800	51,100
Geese	11,918	13,198	2·98	2·69	35,500	35,500
Ducks	23,360	32,957	1·44	1·25	33,600	41,200
Other fowls	1,403,082	1,851,102	1·37	1·03	1,922,200	1,906,600
Totals	1,446,916	1,910,772	–	–	2,028,100	2,034,400

3.—Fur Farming.

Fur Farms of Canada, 1922.—The term "fur farm" includes farms devoted entirely to the raising of fur-bearing animals, together with parts of farms where the raising of fur-bearing animals is carried on as a distinct branch of the operations. Of such farms there were in Canada in 1922, according to the reports issued by the Dominion Bureau of Statistics, 1,026, including 977 fox farms and 49 farms raising miscellaneous fur-bearing animals, the former showing an increase of 202 over 1921, and the latter an increase of 12. This increase was general throughout the Dominion except in Yukon Territory. The total value of the land and buildings was $1,925,951, as compared with $1,589,300 in 1921 (Table 14), and of the fur-bearing animals $5,864,153, as compared with $5,977,545 in 1921 (Table 15). The slight decline in the value of fur-bearing animals was due to the drop in the value of silver foxes, the numbers of which showed an increase of 4,364, or 24 p.c., over 1921, while their value showed a decrease of $126,338, or 2 p.c.; their general average value being only $254, as compared with $322 in 1921.

The fur-bearing animals born in captivity in 1922 numbered 19,199, while 3,626 died and 8,278 were killed for their pelts. The total number of live animals sold was 4,339, of which 3,794 were silver foxes. The total amount received by fur farmers in 1922 from the sale of live animals and pelts was $1,537,525, as compared with $1,498,105 in 1921. For a more intensive study of fur farms the reader is referred to the report on Fur Farms, 1922, which may be obtained, as long as copies are available, on application to the Dominion Statistician.

14.—Number of Fur Farms and Value of Land and Buildings, 1920, 1921 and 1922.

Provinces.	Fur Farms.			Value of Land and Buildings.		
	1920.	1921.	1922.	1920.	1921.	1922.
	No.	No.	No.	$	$	$
Prince Edward Island	309	375	435	640,489	763,235	810,694
Nova Scotia	55	108	121	67,875	127,724	129,493
New Brunswick	57	64	86	101,354	132,810	160,605
Quebec	80	109	156	121,498	173,204	238,967
Ontario	42	94	128	70,928	144,049	200,360
Manitoba	2	6	19	53,268	90,850	202,685
Saskatchewan	2	5	9	33,000	37,075	40,200
Alberta	15	14	26	59,700	61,875	62,137
British Columbia	11	21	30	13,029	21,100	45,080
Yukon Territory	14	16	16	41,450	37,378	35,730
Totals for Canada	**587**	**812**	**1,026**	**1,202,591**	**1,589,300**	**1,925,951**

15.—Number and Value of Fur-bearing Animals on Fur Farms in Canada, 1920, 1921 and 1922.

Kind of Animal.	Number of Fur-bearing Animals.			Value of Fur-bearing Animals.		
	1920.	1921.	1922.	1920.	1921.	1922.
	No.	No.	No.	$	$	$
Silver Fox	13,694	17,954	22,318	4,536,417	5,789,465	5,663,127
Patch Fox	1,103	1,237	1,384	87,735	102,850	103,055
Red Fox	373	484	435	11,810	10,035	8,626
Blue Fox	3	–	10	748	–	2,200
White Fox	1	–	16	100	–	700
Mink	188	210	288	4,835	5,366	6,051
Marten	3	8	3	100	410	175
Fisher	6	5	7	675	700	700
Raccoon	23	55	105	260	854	1,313
Skunk	33	99	34	125	500	396
Opossum	–	9	–	–	65	–
Lynx	2	2	3	100	200	150
Bear	–	2	–	–	200	–
Brown Beaver	–	39	81	–	1,300	2,400
White Beaver	–	1	–	–	50	–
Muskrat	–	2,250	5,157	–	5,550	7,210
Karakul Sheep	1,100	750	941	80,000	60,000	68,050
Total	**16,529**	**23,105**	**30,782**	**4,722,905**	**5,977,545**	**5,864,153**

4.—Dairying Statistics.

The first permanent introduction of cows into Canada was undoubtedly made by Champlain at Quebec between 1608 and 1610. In 1629 he had 60 or 70 cattle on his farm at Cap Tourmente. In 1660, Colbert, the great French Minister, sent to New France representatives of the best dairy cows of Normandy and Brittany. In 1667 there were 3,107 head of cattle in New France and in 1671, 866 in Acadia. The first cattle in what is now Ontario were taken thither by La Motte Cadillac in 1701. In 1823 a herd of 300 cattle was driven north to the Red River Settlement and sold to the settlers. Cattle in British Columbia date from as early as 1837.

Cheese Production.—The early French colonists made butter and cheese, of which the *"fromage raffiné"* still made on the Isle of Orleans is probably a survival. The United Empire Loyalists introduced cheese and buttermaking into the districts settled by them, and as early as 1801 sent their surplus butter and cheese to the United States. The first modern cheese factory in Canada commenced business in the county of Oxford in 1864, while shortly afterwards factories were established

in the Burkville and Belleville districts of Ontario, in Missisquoi County, Quebec, near Essex, New Brunswick, and in Annapolis County, Nova Scotia. These factories were established before 1870; after that date the number rapidly increased.

Creameries.—The first creamery in Canada was established at Athelstan, Huntington County, Quebec, in 1873, while the first cream separator was installed at Ste. Marie, Beauce County, Quebec, in 1882. The first Ontario creamery was established in 1875, and what was probably the first cream separator in Ontario was installed at Belleville in 1883.

Production and Value of Creamery Butter.—The total quantity of creamery butter produced in Canada in 1922 (Table **16**) was 152,501,900 lb., of the value of $53,453,282, as compared with 128,744,610 lb., of the value of $48,135,439 in 1921, an increase in quantity of 23,757,290 lb., or 18 p.c., and an increase in value of $5,317,843, or 11 p.c. The increase in value is due to the increased quantity, as the average price per pound dropped from 37 cents in 1921 to 35 cents in 1922. Increased production of creamery butter is shown by all the provinces, the largest proportionate increase being in Quebec, where the production increased during the year by 8,780,067 lb., or 18 p.c.

16.—Production and Value of Creamery Butter, by Provinces, 1920-22.

Provinces.	1920.	1921.	1922.	1920.	1921.	1922.
	lb.	lb.	lb.	$	$	$
Prince Edward Island	1,166,032	1,109,546	1,262,006	674,744	452,523	449,303
Nova Scotia	2,503,188	3,094,768	3,329,426	1,518,757	1,306,465	1,244,958
New Brunswick	1,053,649	1,152,168	1,224,936	606,891	475,112	467,287
Quebec	41,632,511	48,478,403	57,258,470	23,586,949	17,594,921	20,024,639
Ontario	37,234,998	43,471,532	51,633,070	21,343,858	16,680,247	18,218,629
Manitoba	7,578,549	8,541,095	10,559,601	4,282,731	3,253,057	3,603,491
Saskatchewan	6,638,656	7,030,053	8,901,144	3,727,140	2,552,698	3,066,573
Alberta	11,821,291	13,048,493	15,417,070	6,555,509	4,543,007	5,126,844
British Columbia	2,062,844	2,818,552	2,916,183	1,334,624	1,277,409	1,252,158
Total	**111,691,718**	**128,744,610**	**152,501,900**	**63,635,203**	**48,135,439**	**53,453,282**

Production and Value of Factory Cheese.—The total production of factory cheese in 1922 (Table **17**) was 135,821,116 lb., of the value of $21,824,760, as compared with 162,117,494 lb., of the value of $28,710,030 in 1921, a decrease in quantity of 26,296,378 lb., or 16·2 p.c., and a decrease in value of $6,885,270, or 24 p.c. The average price of cheese fell from 17 cents in 1921 to 16 cents in 1922. The provinces showing increased production were Prince Edward Island, 4·18 p.c.; Nova Scotia, 8·08 p.c.; Alberta, 0·14 p.c.; and British Columbia, 2·87 p.c.

17.—Production and Value of Factory Cheese, by Provinces, 1920-22.

Provinces.	1920.	1921.	1922.	1920.	1921.	1922.
	lb.	lb.	lb.	$	$	$
Prince Edward Island	2,081,277	1,681,779	1,752,233	525,635	293,651	284,471
Nova Scotia	52,638	29,440	31,820	14,865	5,578	5,010
New Brunswick	1,235,008	1,100,382	926,052	336,409	203,941	147,503
Quebec	52,162,777	54,242,735	38,923,770	13,372,250	9,197,911	6,065,539
Ontario	92,784,757	103,432,696	92,707,059	24,605,823	18,676,380	15,036,980
Manitoba	116,229	255,829	102,354	31,611	47,341	16,747
Saskatchewan	28,367	22,659	12,448	7,790	4,209	2,026
Alberta	398,750	930,660	931,992	110,355	200,478	183,860
British Columbia	342,053	421,314	433,388	96,134	80,541	82,624
Total	**149,201,856**	**162,117,494**	**135,821,116**	**39,100,872**	**28,710,030**	**21,824,760**

Condensed Milk and Milk Powder.—The quantity of condensed milk made in Canada in 1922 was 21,241,080 lb., of the value of $2,388,319, a decrease in quantity of 17,756,856 lb., or 45·53 p.c., as compared with 1921. The quantity of evaporated milk made was 32,392,570 lb., valued at $3,137,039, a slight increase in quantity over 1921. The quantity of milk powder and skim milk powder made in 1922 was 7,352,716 lb., valued at $1,173,447. Of the 23 condenseries in operation in Canada in 1922, 20 were situated in Ontario, and to the total value of products of condenseries of $9,501,345 Ontario contributed $8,256,861. Table 18 shows the quantity and value of products other than butter and factory cheese for the years 1920, 1921 and 1922.

18.—Miscellaneous Products of Dairy Factories, 1920, 1921 and 1922.

Product.	1920.		1921.		1922.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		$		$		$
Condensed milk..... lb.	53,662,699	10,202,230	38,997,936	5,837,787	21,241,080	2,388,319
Evaporated milk..... lb.	30,469,642	3,809,653	31,202,713	3,428,456	32,392,570	3,137,039
Milk powder..... lb.	7,574,668	2,178,176	1,703,496	554,918	1,430,466	456,371
Skim milk powder..... lb.	–	–	5,749,229	830,585	5,922,250	717,076
Sterilized milk..... lb.	7,608,927	785,044	6,696,264	719,009	150,000	11,000
Skim condensed milk... lb.	363,294	18,723	1,307,781	51,788	1,505,354	58,876
Condensed coffee and cocoa..... lb.	531,451	147,052	324,011	94,065	297,348	60,257
Whey butter..... lb.	1,516,932	757,156	1,337,404	431,114	1,140,386	345,946
Casein..... lb.	109,958	19,233	98,136	9,814	82,538	10,294
Ice cream.....gal.	2,996,514	4,151,949	3,007,337	3,957,918	2,771,925	3,669,564
Milk sold.....gal.	28,199,796	14,249,858	27,660,810	12,846,749	31,097,939	12,309,128
Cream sold...(lb. butter fat)	7,379,131	6,533,098	8,051,215	5,734,638	9,219,324	5,607,315
Buttermilk sold.....	–	306,235	–	300,278	–	269,276
Sundry.....	–	452,009	–	271,429	–	653,543
Total.....	–	**43,610,416**	–	**35,078,548**	–	**29,694,004**

Retrospective Statistics.—In Table 19 the production and value of creamery butter and factory cheese is compared by provinces and for all Canada for the years 1900, 1910 and 1915, and annually from 1920 to 1922. Table 20 shows the total value of all the products of dairy factories by provinces for the five years 1918 to 1922.

19.—Production and Value of Creamery Butter and Factory Cheese in Canada, by Provinces, 1900, 1910, 1915 and 1920 to 1922.

Years.	Establishments.	Creamery Butter.		Factory Cheese.	
	No.	lb.	$	lb.	$
Canada.....1900	3,576	36,066,739	7,240,972	220,833,269	22,221,430
1910	3,625	64,489,398	15,597,807	199,904,205	21,587,124
1915	3,513	83,991,453	24,385,052	183,887,837	27,097,176
1920	3,165	111,691,718	63,625,203	149,201,856	39,100,372
1921	3,121	128,744,610	48,135,439	162,117,494	28,710,030
1922	3,095	152,501,900	53,453,282	135,821,116	21,824,760
Prince Edward Island.....1900	47	562,220	118,402	4,457,519	449,400
1910	45	670,908	156,478	3,293,755	354,378
1915	42	539,516	151,065	2,260,000	327,700
1920	37	1,166,032	674,744	2,081,277	525,635
1921	34	1,109,546	452,523	1,681,779	293,651
1922	33	1,262,006	449,303	1,752,233	284,471

19.—Production and Value of Creamery Butter and Factory Cheese in Canada, by Provinces, 1900, 1910, 1915 and 1920 to 1922—concluded.

Years.	Establishments.	Creamery Butter.		Factory Cheese.	
	No.	lb.	$	lb.	$
Nova Scotia.....1900	33	334,211	68,686	568,147	58,321
1910	18	354,785	88,481	264,243	29,977
1915	27	1,240,483	346,011	125,580	18,837
1920	26	2,503,188	1,518,757	52,638	14,865
1921	26	3,094,768	1,306,465	29,440	5,578
1922	25	3,329,246	1,244,958	31,820	5,010
New Brunswick.....1900	68	287,814	58,589	1,892,686	187,106
1910	42	849,633	212,205	1,166,243	129,677
1915	43	776,416	231,838	1,165,651	168,086
1920	38	1,053,649	606,891	1,235,008	336,409
1921	38	1,152,168	475,112	1,100,382	203,941
1922	35	1,224,930	467,287	926,052	147,503
Quebec.....1900	1,992	24,625,000	4,916,756	80,630,199	7,957,621
1910	2,143	41,782,678	9,961,732	58,171,091	6,195,254
1915	2,058	36,621,491	10,899,810	54,217,113	7,571,691
1920	1,809	41,632,511	23,580,949	52,162,777	13,372,250
1921	1,774	48,478,403	17,594,921	54,242,735	9,197,911
1922	1,752	57,258,470	20,024,039	38,923,770	6,065,539
Ontario.....1900	1,336	7,559,542	1,527,935	131,967,612	13,440,987
1910	1,254	13,876,888	3,331,025	136,093,951	14,769,566
1915	1,164	26,414,120	7,534,653	125,001,136	18,831,413
1920	1,058	37,234,998	21,343,858	92,784,757	24,605,823
1921	1,059	43,471,532	16,680,247	103,432,696	18,676,380
1922	1,053	51,633,070	18,218,629	92,707,059	15,036,980
Manitoba.....1900	69	1,557,010	292,247	1,289,413	124,025
1910	42	2,050,487	511,972	694,713	81,403
1915	59	5,839,667	1,693,503	726,725	109,008
1920	57	7,578,549	4,282,731	116,229	31,611
1921	51	8,541,095	3,253,057	255,829	47,341
1922	47	10,559,601	3,603,491	102,354	16,747
Saskatchewan.....1900	5	143,645	29,362	6,000	868
1910	27	1,548,696	381,809	26,730	3,396
1915	29	3,811,014	1,055,000	–	–
1920	47	6,638,656	3,727,140	28,367	7,790
1921	56	7,030,053	2,552,698	22,659	4,209
1922	60	8,901,144	3,066,573	12,448	2,026
Alberta.....1900	18	601 489	123,305	21,693	3,102
1910	56	2,149,121	533,422	193,479	23,473
1915	62	7,544,148	2,021,448	381,632	68,441
1920	55	11,821,291	6,555,509	398,750	110,355
1921	49	13,048,493	4,543,047	930,660	200,478
1922	60	15,417,070	5,126,844	931,992	183,860
British Columbia.....1900	8	395,808	105,690	–	–
1910	9	1,206,202	420,683	–	–
1915	29	1,204,598	451,724	10,000	2,000
1920	34	2,062,844	1,334,624	342,053	96,134
1921	34	2,818,552	1,227,409	421,314	80,541
1922	30	2,916,183	1,252,158	433,388	82,624

20.—Total Value of All Products of Dairy Factories, by Provinces, 1918–22[1].

Provinces.	1918.	1919.	1920.	1921.	1922.
	$	$	$	$	$
Canada	**107,340,850**	**135,196,602**	**146,336,491**	**111,924,017[2]**	**104,972,046**
P. E. Island	855,374	1,184,163	1,252,013	786,696	793,819
Nova Scotia	1,423,451	1,974,269	2,517,338	1,517,870	1,917,033
New Brunswick	768,034	1,167,256	1,196,354	897,288	858,765
Quebec	31,033,944	36,790,037	37,732,572	26,796,939	26,089,578
Ontario	54,785,716	69,897,519	75,926,248	60,046,795	53,542,605
Manitoba	6,119,219	7,042,646	7,788,178	6,052,676	6,459,836
Saskatchewan	3,261,222	5,042,377	5,536,245	4,197,808	4,553,541
Alberta	5,550,583	7,872,541	8,838,298	6,522,814	6,831,470
British Columbia	3,543,307	4,225,794	5 549,245	3,977,820	3,925,399

[1] The total value of dairy products in 1901 and various subsequent years is shown in the "Statistical Summary of the Progress of Canada," immediately following the table of contents.

[2] Includes the sum of $1,127,311 not apportioned by Provinces.

5.—Fruit Production.

Fruit culture in Canada is mainly carried on in several widely-separated regions. Apples are chiefly grown in the Annapolis valley in Nova Scotia, in Ontario and in British Columbia. Peaches are grown in the Niagara peninsula, along lake Erie, and in British Columbia; plums and cherries in Ontario and Quebec.

Statistics of the number of bearing and non-bearing fruit trees, collected at the census of 1921, are published in Table **21**, together with comparative figures for 1911; from these it may be seen that only in peaches was there an increase during the decade in the number of bearing trees. Nevertheless, when the statistics of production of Table **22**, also collected at the census, are consulted, there is evident a great increase since 1910 in the production of apples, peaches, plums and cherries. This may indicate that to-day fruit-growing is on a much more scientific basis than in the past, and that the yield per bearing tree is larger because of the greater attention given to the selection of stock and the care of trees.

21.—Fruit Trees, bearing and non-bearing, together with average number per farm and per 100 acres of improved land, 1911 and 1921.

Kinds.	Trees, bearing.		Trees, non-bearing.		Trees per farm.		Trees per 100 acres improved land.	
	1911.	1921.	1911.	1921.	1911.	1921.	1911.	1921.
	No.	No.	No.	No.	No.	No.	No.	No.
Fruit Trees—								
Apple	10,617,372	9,802,218	5,599,804	2,649,740	–	17·51	–	17·57
Peach	839,288	1,021,709	1,056,359	174,513	–	1·68	–	1·69
Pear	581,704	501,586	385,538	172,304	–	0·95	–	0·95
Plum	1,075,130	985,267	637,220	266,889	–	1·76	–	1·77
Cherry	741,992	688,504	495,082	195,999	–	1·24	–	1·25
Other	146,659	–	141,233	–	–	–	–	–
Total	**14,002,145**	**12,999,284**	**8,315,236**	**3,459,445**	–	**23·14**	–	**23·23**

22.—Fruit production for all Canada, together with the average production per farm and per 100 acres of improved land, 1900-1920.

Kinds.	Total Production.			Average Production.					
				Per farm.			Per 100 acres improved land.		
	1900.	1910.	1920.	1900.	1910.	1920.	1900.	1910.	1920.
Orchard fruits—									
Apples.....bush.	18,626,186	10,618,666	17,475,414	34·23	14·87	24·57	61·75	21·79	24·66
Peaches..... "	545,415	646,826	1,076,223	1·00	0·90	1·51	1·81	1·33	1·52
Pears..... "	531,837	504,171	521,036	0·96	0·70	0·70	1·76	1·03	0·74
Plums..... "	557,875	508,994	808,369	1·02	0·71	1·14	1·85	1·05	1·14
Cherries..... "	336,751	238,974	502,447	0·61	0·33	0·71	1·11	0·49	0·71
All other.... "	70,396	47,789	–	0·13	0·07	–	0·23	0·09	–
Total..... "	20,668,460	12,565,420	20,383,489	37·95	17·58	28·63	68·51	25·78	28·77
Small fruits—									
Grapes..... lb.	24,302,634	32,898,438	33,269,412	44·62	46·03	46·79	80·56	67·50	46·94
Straw-berries..... qts.	–	18,686,662	15,411,188	–	26·15	21·67	–	38·35	21·74
Raspberries. "	–	[1]	8,378,718	–	[1]	11·78	–	[1]	11·82
Currants and gooseber-ries..... "	21,707,791	3,830,609	2,002,136	39·85	5·36	2·82	71·96	7·86	2·82
Other small fruits..... "	–	9,000,208	843,407	–	12·60	1·19	–	18·47	1·19

[1]Included with other small fruits.

Fruit Production of Canada, 1920-22.—The accompanying tables show (23) the production and value of apples in Canada, by provinces, in 1920, according to the Census of 1921; (24) the production and value of commercial apples in Canada by provinces in 1921 and 1922; and (25) the production and value of all kinds of commercial fruits in Canada for the years 1920 to 1922. The values in Table 23 represent the prices paid to growers on the farm for the fruit alone; but the values in Tables 24 and 25 for the years 1921 and 1922 represent the wholesale market prices of graded fruit, including all charges such as packing, insurance, transportation, marketing, etc. Also the data for 1920 result from the Census of 1921, whilst the data for the years 1921 and 1922 represent estimates, based partly on the Census of 1921, and issued jointly by the Dominion Bureau of Statistics and the Fruit Branch of the Department of Agriculture.

23.—Production and Value of Apples in Canada by Provinces in 1920, according to the Census of 1921.

Provinces.	Total quantity.	Average price.	Total value.
	barrels.	$ c.	$
Prince Edward Island	58,255	2 68	156,097
Nova Scotia	1,440,812	2 73	3,936,000
New Brunswick	130,876	3 00	393,527
Quebec	334,045	3 71	1,239,168
Ontario	3,257,483	2 02	6,592,359
Prairie Provinces	496	6 30	3,127
British Columbia	606,665	4 44	2,696,329
Total	**5,828,632**	**2 58**	**15,016,607**

24.—Production and Value of Commercial Apples in Canada, by Provinces, 1921 and 1922.

Provinces.	Year.	Total quantity.	Average price.	Total value.
		barrels.	$ c.	$
Nova Scotia	1921	2,036,065	5 45	11,096,554
	1922	1,891,852	4 15	7,851,185
New Brunswick	1921	138,589	5 00	692,945
	1922	173,236	4 50	779,562
Quebec	1921	124,564	5 66	704,686
	1922	216,984	7 00	1,518,888
Ontario	1921	1,932,280	7 10	13,719,188
	1922	1,739,000	4 37	7,608,050
British Columbia	1921	1,136,202	8 46	9,607,717
	1922	1,027,333	6 75	6,934,497
Totals	**1921**	**5,367,700**	**6 67**	**35,821,090**
	1922	**5,048,405**	**4 90**	**24,692,182**

25.—Production and Value of all Kinds of Commercial Fruits in Canada, 1920-1922.

Fruits.	Year.	Total quantity.	Average price.	Total value.
		barrels.	$ c.	$
Tree Fruits:—				
Apples	1920	5,828,632	2 58	15,016,607
	1921	5,367,700	6 67	35,821,090
	1922	5,048,405	4 90	24,692,182
		bushels.		
Pears	1920	520,330	1 38	715,776
	1921	435,968	2 58	1,124,162
	1922	461,227	1 45	668,854
Plums and Prunes	1920	809,363	1 21	979,237
	1921	575,575	1 47	844,412
	1922	408,438	1 28	522,393
Peaches	1920	1,077,195	1 19	1,281,632
	1921	366,715	2 30	844,936
	1922	577,561	1 56	904,325
Cherries	1920	485,128	2 38	1,153,429
	1921	211,210	2 75	580,827
	1922	202,740	2 38	481,850
Small Fruits:		quarts.		
Strawberries	1920	15,658,346	0 19	2,977,041
	1921	10,149,000	0 16	1,622,960
	1922	8,678,200	0 18	1,526,050
Raspberries	1920	8,360,518	0 23	1,962,681
	1921	7,522,950	0 15	1,123,001
	1922	6,271,725	0 18	1,159,287
Other Berries	1920	2,827,241	0 19	539,138
	1921	2,931,790	0 17	489,062
	1922	2,837,549	0 15	428,757
		lb.		
Grapes	1920	33,269,412	0 07	2,328,860
	1921	46,872,308	0 05	2,812,338
	1922	70,308,462	0 05	3,515,423
Total Values	**1920**	–	–	**26,954,401**
	1921	–	–	**45,262,788**
	1922	–	–	**33,899,121**

Summary of Fruit Production of Canada.—For the year 1920 the census statistics of production and value are as follows Apples, 5,828,632 barrels, $15,016,607; pears, 520,330 bushels, $715,776; plums and prunes, 809,363 bushels, $979,237; peaches, 1,077,195 bushels, $1,281,632; cherries, 485,128 bushels, $1,153,429; strawberries, 15,658,346 quarts, $2,977,041; raspberries, 8,360,518 quarts, $1,962,681; other berries, 2,827,241 quarts, $539,138; grapes, 33,269,412 lb., $2,328,860. Altogether the value to growers of the various kinds of fruit specified represents for the year 1920 a total of $26,954,401. For the year 1922 the estimated production and value of the various fruits produced commercially are as follows, with the corresponding figures for 1921 given within brackets Apples, 5,048,405 barrels, $24,692,182 (5,367,700 barrels, $35,821,090); pears, 461,227 bushels, $668,854 (435,968 bushels, $1,124,162); plums and prunes, 408,438 bushels, $522,393 (575,575 bushels, $844,412); peaches, 577,561 bushels, $904,325 (366,715 bushels, $844,936); apricots, 37,766 bushels (31,205 bushels); cherries, 202,740 bushels, $481,850 (211,210 bushels, $580,827); strawberries, 8,678,200 quarts, $1,526,050 (10,149,000 quarts, $1,622,960); raspberries, 6,271,725 quarts, $1,159,787 (7,522,950 quarts, $1,123,001); other berries, 2,837,549 quarts, $428,757 (2,931,290 quarts, $489,062); grapes, 70,308,462 lb., $3,515,423 (46,872,308 lb., $2,812,338). The total estimated value of the commercial fruit production of 1922, as computed at the average wholesale prices in the city markets, is therefore $33,899,121, as compared with $45,262,788 in 1921.

6.—Farm Labour and Wages.

Average Wages of Farm Help.—For 1922 the average wages of farm help showed a substantial decline as compared with 1921, and a still greater decline as compared with 1920, the record year. For the whole of Canada the average wages per month of farm helpers during the summer season of 1922 were for men $59 and for women $39, including board, the average value of which was $21 for men and $17 for women. In 1921 the corresponding averages were $67 for men, including board, value $22, and $42 for women, including board, value $18. For the complete year 1922 the average value of wages and board was $594 for men and $418 for women, as compared with $669 for men and $449 for women in 1921. The average yearly value of board in 1922 is $235 for men and $191 for women, as compared with $248 for men and $200 for women in 1921. By provinces the average wages for men and women respectively in the summer season, and including board, were in 1922 as follows, the figures for 1921 being given within brackets for comparison: Prince Edward Island $40 and $27 ($45 and $27); Nova Scotia $50 and $29 ($56 and $31); New Brunswick $53 and $32 ($54 and $31); Quebec $53 and $29 ($58 and $32); Ontario $57 and $37 ($60 and $38); Manitoba $63 and $43 ($79 and $50); Saskatchewan $64 and $46 ($80 and $51); Alberta $64 and $45 ($78 and $54); British Columbia $75 and $54 ($79 and $54).

In Table **26** the total value of wages and board is given for 1922, as compared with previous years, and in Table **27** the value of the yearly board for 1922, as compared with 1921 and 1920 is given separately.

26.—Average Wages of Farm Help in Canada, as estimated by Crop Correspondents, 1915-22.

Provinces.		Males per month in summer season.			Females per month in summer season.			Males per year.	Females per year.
		Wages.	Board.	Wages and board.	Wages.	Board.	Wages and board.	Wages and board.	Wages and board.
		$	$	$	$	$	$	$	$
Canada	1915	22	15	37	9	11	20	341	200
	1916	26	17	43	9	13	22	397	228
	1917	45	19	64	19	15	34	611	364
	1918	49	21	70	21	17	38	681	416
	1919	54	24	78	24	19	43	764	465
	1920	60	26	86	27	20	47	821	492
	1921	45	22	67	24	18	42	669	449
	1922	38	21	59	22	17	39	594	418
P. E. Island	1915	17	10	27	6	9	15	238	137
	1916	18	13	31	9	9	18	301	167
	1917	26	14	40	13	10	23	407	254
	1918	31	15	46	14	11	25	469	289
	1919	33	18	51	15	13	28	504	318
	1920	42	18	60	18	14	32	572	372
	1921	29	16	45	15	12	27	460	287
	1922	26	14	40	15	12	27	415	295
Nova Scotia	1915	21	12	33	8	8	16	310	169
	1916	23	16	39	8	11	19	365	195
	1917	37	17	54	14	12	26	543	296
	1918	41	19	60	16	14	30	590	326
	1919	47	22	69	18	16	34	628	346
	1920	49	24	73	21	17	38	735	408
	1921	36	20	56	17	14	31	592	352
	1922	31	19	50	16	13	29	536	327

26.—Average Wages of Farm Help in Canada, as estimated by Crop Correspondents, 1915-22—concluded.

Provinces.		Males per month in summer season.			Females per month in summer season.			Males per year.	Females per year.
		Wages.	Board.	Wages and Board.	Wages.	Board.	Wages and board.	Wages and board.	Wages and board.
		$	$	$	$	$	$	$	$
New Brunswick	1915	20	14	34	8	8	16	308	153
	1916	22	14	36	7	10	17	328	164
	1917	39	18	57	15	13	28	572	306
	1918	49	20	69	17	14	31	725	335
	1919	56	23	79	20	15	35	804	401
	1920	56	23	79	19	16	35	785	391
	1921	35	19	54	17	14	31	575	332
	1922	34	19	53	17	15	32	520	317
Quebec	1915	20	13	33	6	10	16	301	159
	1916	25	16	41	9	11	20	371	196
	1917	42	17	59	17	12	29	523	287
	1918	45	20	65	20	13	33	575	317
	1919	53	23	76	22	15	37	695	372
	1920	62	24	86	24	16	40	767	407
	1921	39	19	58	18	14	32	559	335
	1922	35	18	53	17	12	29	510	306
Ontario	1915	18	13	31	6	11	17	304	179
	1916	23	16	39	19	13	32	360	206
	1917	41	18	59	18	14	32	561	344
	1918	42	20	62	19	16	35	667	382
	1919	48	22	70	22	18	40	691	431
	1920	52	23	75	25	19	44	736	470
	1921	40	20	60	22	16	38	609	418
	1922	37	20	57	21	16	37	569	397
Manitoba	1915	30	15	45	14	13	27	390	245
	1916	30	18	48	12	15	27	454	283
	1917	47	21	68	23	17	40	689	452
	1918	55	23	78	26	19	45	791	494
	1919	63	26	89	32	20	52	889	557
	1920	70	28	98	34	24	58	975	559
	1921	53	26	79	28	22	50	798	552
	1922	40	23	63	24	19	43	640	471
Saskatchewan	1915	25	17	42	10	14	24	386	241
	1916	31	18	49	11	15	26	434	278
	1917	50	23	73	23	18	41	734	470
	1918	61	25	86	29	20	49	849	545
	1919	66	28	94	32	23	55	912	598
	1920	72	30	102	35	25	60	1,003	653
	1921	54	26	80	29	29	51	795	556
	1922	40	24	64	25	21	46	673	502
Alberta	1915	27	17	44	10	14	24	404	253
	1916	32	20	52	13	16	29	501	299
	1917	53	23	76	25	19	44	784	476
	1918	60	26	86	28	22	50	863	569
	1919	67	28	95	34	24	58	976	648
	1920	76	31	107	36	26	62	1,038	638
	1921	52	26	78	31	23	54	746	566
	1922	41	23	64	24	21	45	628	482
British Columbia	1915	30	19	49	15	16	31	463	287
	1916	28	22	50	11	18	29	543	325
	1817	53	25	78	27	21	48	803	481
	1918	61	28	89	34	23	57	903	589
	1919	65	31	96	37	27	64	1,065	715
	1920	64	31	95	36	27	63	1,033	742
	1921	52	27	79	31	23	54	855	613
	1922	47	28	75	30	24	54	849	636

27.—Average Wages per Year of Farm Help in Canada, as estimated by Crop Correspondents, 1920-22.

Provinces.		Males.			Females.		
		Wages.	Board.	Wages and board.	Wages.	Board.	Wages and board.
		$	$	$	$	$	$
Canada	1920	543	278	821	275	217	492
	1921	421	248	669	249	200	449
	1922	359	235	594	227	191	418
Prince Edward Island	1920	371	201	572	212	160	272
	1921	282	178	460	151	136	287
	1922	247	168	415	165	130	295
Nova Scotia	1920	472	263	735	218	190	408
	1921	364	228	592	182	170	352
	1922	327	209	536	177	150	327
New Brunswick	1920	531	254	785	213	178	391
	1921	361	214	575	183	149	332
	1922	328	192	520	168	149	317
Quebec	1920	524	243	767	235	172	407
	1921	360	199	559	193	142	335
	1922	322	188	510	176	130	306
Ontario	1920	474	262	736	259	211	470
	1921	382	227	609	233	185	418
	1922	348	221	569	225	172	397
Manitoba	1920	650	325	975	312	247	559
	1921	503	295	798	303	249	552
	1922	381	259	640	250	221	471
Saskatchewan	1920	667	336	1,003	364	289	653
	1921	498	297	795	302	254	556
	1922	398	275	673	267	235	502
Alberta	1920	697	341	1,038	360	278	638
	1921	463	283	746	318	248	566
	1922	367	261	628	248	234	482
British Columbia	1920	684	349	1,033	431	311	742
	1921	552	303	855	353	260	613
	1922	526	323	849	342	294	636

7.—Prices of Agricultural Produce.

Tables **28** to **33** and **35** to **39** record the average prices of Canadian agricultural produce and Table **34** the yearly average prices from 1902 of British-grown wheat, barley and oats. Tables **28** to **32** record the average prices of Canadian grain at Winnipeg, basis in store Fort William-Port Arthur, weekly, for the weeks ended Saturday during the year 1922 (Tables **28, 30, 31**) and in monthly averages for the three years 1920 to 1922 (Tables **29, 32**). Table **33** gives the monthly range of average prices in British markets of Canadian wheat and oats for the years 1920 to 1922, the English currency, weights and measures having been converted into Canadian equivalent denominations at the par rate of exchange. Table **35** gives the monthly average prices of flour, bran and shorts at principal markets in 1922, Table **36** the average prices of Canadian live stock at principal markets for the three years 1920 to 1922, and Table **37** the average monthly prices of selected descriptions of Canadian live stock at principal markets in 1922. The last-named table is an abridgment of the more detailed classification appearing in the Monthly Bulletin of Agricultural Statistics. Tables **38** and **39** give the average prices per lb. paid to and paid by farmers in Canada for clover and grass seed in 1923 and previous years.

28.—Weekly Range of Cash Prices per bushel of Canadian Wheat at Winnipeg, basis in store Fort William-Port Arthur, 1922.

(Per bushel of 60 lb.)

SOURCE: BOARD OF GRAIN COMMISSIONERS FOR CANADA.

Date.	No. 1 Northern.	No. 2 Northern.	No. 3 Northern.	No. 4.	No. 5.	No. 6.	Feed.
1922.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.
January 7	1.07⅜–1.13⅞	1.02⅛–1.08⅜	0.93⅜–0.98⅛	0.88⅛–0.92⅞	0.81⅛–0.85⅞	0.72⅜–0.76⅞	0.66⅜–0.70⅞
" 14	1.10⅜–1.14⅛	1.05⅜–1.08⅞	0.95⅞–0.99⅜	0.89⅞–0.93⅝	0.82⅞–0.86⅜	0.74⅜–0.78⅝	0.68⅜–0.72⅝
" 21	1.14⅛–1.16⅝	1.09⅞–1.12⅜	0.99⅞–1.02⅛	0.94⅜–0.97⅜	0.87⅞–0.90⅜	0.79⅞–0.82⅜	0.73⅜–0.76⅜
" 28	1.14⅜–1.18⅝	1.10⅛–1.15⅞	1.01⅜–1.05⅛	0.95⅜–0.98⅞	0.89½–0.91⅞	0.81½–0.84⅞	0.75½–0.78⅞
Average	**1.11⅞–1.15¼**	**1.06⅞–1.11⅜**	**0.97½–1.01¼**	**0.92⅛–0.95¼**	**0.85⅜–0.88⅜**	**0.77⅛–0.80⅜**	**0.71⅛–0.74⅜**
February 4	1.18¼–1.21½	1.15⅛–1.18½	1.05⅞–1.09½	0.98⅞–1.03½	0.90⅜–0.96	0.83⅞–0.89	0.77⅛–0.83
" 11	1.23 –1.28⅜	1.20 –1.24½	1.11⅜–1.17½	1.05½–1.10½	0.97½–1.02½	0.91½–0.96½	0.85½–0.90½
" 18	1.34½–1.39½	1.29⅜–1.34⅜	1.23½–1.27⅞	1.16½–1.21⅜	1.08½–1.12⅞	1.02 –1.05⅞	0.96 –0.99⅞
" 25	1.42 –1.46¼	1.37 –1.41¼	1.30⅝–1.34½	1.23½–1.28	1.15½–1.19½	1.08 –1.12½	1.02½–1.06½
Average	**1.29⅜–1.34**	**1.25½–1.29⅝**	**1.17⅜–1.22¼**	**1.11⅛–1.15⅞**	**1.03 –1.07¼**	**0.96⅛–1.00⅞**	**0.90⅛–0.94⅞**
March 4	1.43¼–1.47½	1.38½–1.42½	1.29½–1.34⅜	1.21⅜–1.27½	1.10⅜–1.17⅞	1.03⅜–1.10⅜	0.97⅜–1.04⅜
" 11	1.39½–1.47½	1.35½–1.42⅜	1.26½–1.32⅜	1.17⅜–1.24⅜	1.06⅜–1.13⅜	0.99¾–1.06⅜	0.92¼–1.00⅞
" 18	1.36 –1.43⅜	1.31⅜–1.39½	1.22⅞–1.30½	1.13½–1.21¼	1.02½–1.10¼	0.94 –1.01⅜	0.89½–0.97½
" 25	1.37⅜–1.41⅞	1.32⅝–1.37⅞	1.24⅝–1.29⅝	1.15¼–1.19⅞	1.04⅜–1.08⅞	0.94⅝–1.00⅝	0.92½–0.96½
Average	**1.39 –1.45**	**1.34½–1.40½**	**1.26 –1.31⅝**	**1.17 –1.23¼**	**1.06 –1.12½**	**0.98 –1.02½**	**0.92⅝–0.99¾**
April 1	1.36½–1.38⅜	1.31⅞–1.34⅜	1.24⅜–1.27	1.15½–1.17¾	1.04¼–1.06⅜	0.94¾–0.96¾	0.91¼–0.93⅞
" 8	1.35½–1.38⅞	1.31 –1.33⅞	1.23 –1.25⅝	1.15¼–1.18⅛	1.04¾–1.07⅝	0.94⅜–0.97⅛	0.90 –0.92⅝
" 15	1.37⅜–1.45⅝	1.32⅜–1.40⅝	1.24⅝–1.31⅞	1.16⅜–1.24⅛	1.07 –1.14¼	0.97 –1.04⅛	0.90⅜–0.97⅝
" 22	1.44⅜–1.50½	1.38⅞–1.45¼	1.30⅛–1.36½	1.21⅞–1.26	1.11⅞ 1.15	1.01⅞–1.05	0.95⅞–0.99
" 29	1.45¼–1.49½	1.40 –1.44	1.31⅜–1.35	1.20 –1.23½	1.08⅝–1.11½	0.98 –1.01½	0.86½–0.95½
Average	**1.39⅜–1.44⅜**	**1.34½–1.39⁷⁄₁₀**	**1.26⁷⁄₁₀–1.31⅕**	**1.17⅝–1.22**	**1.07⅝–1.11**	**0.97¼–1.01**	**0.90⅞–0.95¾**
May 6	1.42¾–1.48¾	1.37¾–1.42⅜	1.30¾–1.35⅝	1.16⅜–1.22¼	1.06⅜–1.11½	0.95⅝–1.00½	0.83⅜–0.88⅜
" 13	1.45⅛–1.47⅞	1.39⅜–1.43⅞	1.31⅝–1.37½	1.17½–1.19⅞	1.05⅝–1.07⅜	0.95½–0.96⅜	0.83⅜–0.84⅝
" 20	1.42½–1.47⅞	1.38⅝–1.44⅜	1.30⅞–1.36⅞	1.18⅜–1.25	1.08⅜–1.12	0.93⅞–0.99	0.82⅝–0.87
" 27	1.40¼–1.44¼	1.35¼–1.39½	1.27⅜–1.31⅜	1.15⅜–1.19⅝	1.06 –1.09⅛	0.92½–0.95⅛	0.81⅜–0.84⅝
Average	**1.42⅝–1.47**	**1.37⅞–1.42⅞**	**1.30¼–1.35½**	**1.17 –1.21¾**	**1.06⅝–1.10**	**0.94⅜–0.97⅞**	**0.82¼–0.86¼**
June 3	1.34⅞–1.38½	1.29⅞–1.33½	1.20⅞–1.25	1.09⅞–1.14¼	1.00⅞–1.04½	0.88⅜–0.91½	0.81½–0.77⅛
" 10	1.31⅛–1.34½	1.27⅛–1.29½	1.18⅛–1.20⅜	1.07⅜–1.11	0.97⅜–1.01	0.85⅝–0.88	0.75⅛–0.78
" 17	1.29 –1.32	1.25 –1.27½	1.15½–1.17½	1.02⅜–1.05	0.93⅝–0.96	0.82⅝–0.85	0.73⅝–0.77
" 24	1.29 –1.35¼	1.24½–1.30⅜	1.14⅜–1.19½	1.02½–1.07¼	0.93½–0.98¼	0.82½–0.87½	0.74½–0.80¼
" 30	1.33 –1.37⅜	1.29¼–1.33⅜	1.17⅝–1.20¼	1.04¼–1.10⅝	0.95½–1.03⅞	0.84⅜–0.94⅝	0.77¼–0.89⅛
Average	**1.31½–1.35½**	**1.27⅝–1.31**	**1.17¼–1.20⅜**	**1.05½–1.09⅝**	**0.96 –1.00¾**	**0.84¼–0.89½**	**0.76½–0.80⅜**
July 8	1.33⅜–1.40⅞	1.31⅜–1.38⅛	1.18¾–1.24⅜	1.06¼–1.13⅝	0.99¾–1.07⅝	0.90¼–0.98⅝	0.84¼–0.93⅝
" 15	1.32⅜–1.38½	1.30⅜–1.34½	1.19 –1.22⅞	1.06 –1.09⅞	0.98 –1.04½	0.89 –0.92⅝	0.81⅜–0.84⅞
" 22	1.30½–1.37⅝	1.31⅛–1.33⅝	1.20⅜–1.22⅝	1.07⅛–1.10½	0.96½–0.99⅜	0.86½–0.89½	0.77⅝–0.81⅝
" 29	1.34 –1.36⅝	1.27⅛–1.31⅜	1.19½–1.24⅝	1.03⅜–1.06⅝	0.93⅜–0.95⅜	0.83⅜–0.85¼	0.73⅜–0.76¼
Average	**1.31½–1.38½**	**1.30⅛–1.34⅜**	**1.19⅜–1.23⅞**	**1.06 –1.10**	**0.97 –1.01⅝**	**0.87½–0.91½**	**0.79⅛–0.84⅛**
August 5	1.28¾–1.33½	1.19¾–1.22½	1.14½–1.17⅛	1.00½–1.02⅝	0.89 –0.91½	0.80⅞–0.82⅝	0.70⅞–0.72⅝
" 12	1.19½–1.32½	1.13⅛–1.21½	1.08⅛–1.15½	0.94¾–0.99⅜	0.79¼–0.87⅜	0.74½–0.81½	0.65⅜–0.71¾
" 19	1.16⅜–1.19½	1.10½–1.12⅛	1.05 –1.07½	0.89½–0.93⅞	0.77 –0.80⅜	0.68⅛–0.71½	0.58½–0.60⅜
" 26	1.08 –1.16¾	1.05 –1.10¾	1.03⅞–1.05¾	0.88⅝–0.91¼	0.76⅞–0.79¾	0.68⅝–0.71⅜	0.58⅝–0.61¾
Average	**1.18⅝–1.25½**	**1.12½–1.16¾**	**1.07⅞–1.11½**	**0.93½–0.96¾**	**0.80⅝–0.84⅛**	**0.73 –0.76¾**	**0.63¾–0.66¾**
September 2	1.00⅞–1.07½	0.99¾–1.04¾	0.96⅜–1.03⅛	0.86¾–0.90¾	0.78¾–0.81¼	0.69⅛–0.72¼	0.59⅝–0.62¼
" 9	1.00⅜–1.05⅞	0.99⅝–1.02⅞	0.96⅞–0.98¼	0.87⅞–0.89	0.80¾–0.82½	0.72¼–0.73½	0.62¼–0.64½
" 16	0.96½–0.99	0.96¼–0.98¾	0.90⅞–0.94¾	0.85¼–0.87½	0.79½–0.82	0.69¾–0.72	0.59¾–0.62
" 23	0.97⅝–1.03½	0.97⅛–1.02⅝	0.94⅝–1.00⅝	0.88⅝–0.94½	0.82½–0.87⅝	0.73⅛–0.78⅝	0.63½–0.68⅝
" 30	0.96½–0.98⅝	0.95 –0.97½	0.91½–0.94	0.88 –0.90¼	0.81 –0.83¼	0.73 –0.75½	0.62 –0.64½
Average	**0.98⅝–1.03**	**0.97½–1.01⅜₁₀**	**0.94 –0.98½**	**0.87⅛–0.90⅜₁₀**	**0.80½–0.83⅜₁₀**	**0.71⅜₁₀–0.74½₁₀**	**0.61¼–0.64⅜₁₀**

28.—Weekly Range of Cash Prices per bushel of Canadian Wheat at Winnipeg, basis in store Fort William-Port Arthur, 1922—concluded.

Date.	No. 1 Northern.	No. 2 Northern.	No. 3 Northern.	No. 4.	No. 5.	No. 6.	Feed.
1922.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.
October 7....	0.96 -0.98⅜	0.94⅞-0.97½	0.89⅞-0.92½	0.87½-0.90½	0.80⅞-0.83½	0.72½-0.75½	0.61⅞-0.64½
" 14....	0.97 -1.02⅜	0.95⅝-1.01¼	0.90⅝-0.96¾	0.88¼-0.94	0.82½-0.89½	0.74⅝-0.81½	0.63⅝-0.70
" 21....	1.00⅜-1.03½	0.99⅝-1.02½	0.95¼-0.98½	0.90⅜-0.95½	0.86¼-0.83	0.81¼-0.83	0.69¾-0.71½
" 28....	1.00⅜-1.06⅜	0.99½-1.05¾	0.96⅜-1.02¾	0.89⅜-0.95½	0.85¼-0.89⅜	– –	– –
Average....	**0.98¼-1.02¾**	**0.97½-1.01¾**	**0.93¼-0.97½**	**0.89¼-0.93¾**	**0.83¾-0.86⅜**	**0.76½-0.80**	**0.64⅛-0.68¾**
November 4..	1.04⅜-1.06¼	1.03¼-1.05⅛	1.00¼-1.02⅜	0.93⅜-0.95⅜	0.88 -0.90⅜	0.82 -0.84⅛	0.72 -0.74⅝
" 11..	1.05⅜-1.07¼	1.04¼-1.05¼	1.01 -1.02¼	0.94¾-0.96¼	0.90 -0.91¾	0.84¼-0.85⅜	0.73¾-0.75½
" 18..	1.09⅜-1.15½	1.07½-1.13½	1.03 -1.10½	0.97¾-1.03½	0.93¼-0.99	0.86⅜-0.92	0.76½-0.82
" 25..	1.09⅜-1.14¾	1.08 -1.12¾	1.05⅜-1.10½	0.99⅜-1.04	0.96⅜-0.99½	0.89¾-0.92½	0.79⅜-0.82½
Average....	**1.07⅜-1.10⅞**	**1.05¾-1.09⅜**	**1.02½-1.06½**	**0.96¼-0.99¾**	**0.92 -0.95½**	**0.85⅝-0.89⅜**	**0.75½-0.78½**
December 2..	1.07⅛-1.11⅝	1.06 -1.10½	1.03⅜-1.07⅜	0.98¼-1.02	0.93½-0.96½	0.86⅜-0.89½	0.77⅜-0.79¾
" 9..	1.06⅜-1.08½	1.04½-1.06⅝	1.00⅜-1.03½	0.97⅜-0.98¼	0.91⅜-0.92½	0.84½-0.85⅝	0.75⅞-0.76⅝
" 16..	1.06⅜-1.10⅜	1.04⅜-1.07½	1.01⅜-1.04⅜	0.96⅞-0.99½	0.90¼-0.93⅜	0.83⅞-0.86½	0.74½-0.77⅜
" 23..	1.10½-1.11⅝	1.07¼-1.08⅜	1.04¼-1.06⅝	1.00 -1.01⅜	0.93½-0.94⅞	0.86½-0.87⅞	0.77½-0.78⅞
" 30..	1.08⅜-1.13⅜	1.06⅜-1.10⅝	1.04¼-1.08⅜	0.98⅝-1.02⅛	0.92¼-0.96⅜	0.85⅛-0.89⅜	0.76⅛-0.80⅜
Average....	**1.08 -1.11**	**1.05¾-1.08¾**	**1.02⅜-1.06**	**0.98¼-1.00⅛**	**0.92¼-0.94¾**	**0.85½-0.87⅜**	**0.76⅛-0.78⅛**

29.—Monthly Range of Average Cash Prices of Canadian Wheat at Winnipeg, basis in store Fort William-Port Arthur, 1920-22.

(Per bushel of 60 lb.)

SOURCE: BOARD OF GRAIN COMMISSIONERS FOR CANADA.

Date.	No. 1 Northern.	No. 2 Northern.	No. 3 Northern.	No. 4.	No. 5.	No. 6.	Feed.
Averages for—	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.
January 1920...	2.15 –	2.12 –	2.08 –	2.02 –	1.91 –	1.81 –	1.71 –
" 1921....	1.89⅝-1.99½	1.86½-1.96¾	1.80⅜-1.90½	1.73½-1.82⅝	1.59½-1.68¼	1.46⅜-1.54⅝	1.37½-1.45½
" 1922...	1.11⅜-1.15¾	1.06¼-1.11⅜	0.97½-1.01¼	0.92⅝-0.95¾	0.85⅜-0.88⅜	0.77⅛-0.80⅝	0.71⅛-0.74⅝
February 1920.	2.15 –	2.12 –	2.08 –	2.02 – –	1.91 –	1.81 –	1.71 –
" 1921.	1.83 -1.91⅞	1.80 -1.88⅜	1.75½-1.84⅜	1.70½-1.78⅝	1.58½-1.67	1.41½-1.49	1.30⅜-1.38½
" 1922.	1.29⅜-1.34	1.25½-1.29⅝	1.17⅝-1.22¼	1.11⅜-1.15⅞	1.03 -1.07¾	0.96⅜-1.00⅞	0.90½-0.94⅞
March 1920....	2.15 –	2.12 –	2.08 –	2.02 –	1.91 –	1.81 –	1.71 –
" 1921....	1.88¼-1.93½	1.85¼-1.90½	1.81¼-1.86½	1.74⅛-1.79¼	1.65¼-1.71⅜	1.49 -1.54½	1.38½-1.45¼
" 1922....	1.39 -1.45	1.34½-1.40½	1.26 -1.31¼	1.17 -1.23¼	1.06 -1.12½	0.98 -1.02½	0.92⅞-0.99¾
April 1920.....	2.15 –	2.12 –	2.08 –	2.02 –	1.91 –	1.81 –	1.71 –
" 1921.....	1.72⅜-1.84½	1.67 -1.80	1.63 -1.75⅜	1.51½-1.62⅝	1.43½-1.54⅜	1.29⅜-1.39	1.23 -1.33½
" 1922.....	1.39⅜-1.44⅝	1.34⅜-1.39	1.26 -1.31⅜	1.17⅜-1.22	1.07⅞-1.11	0.97½-1.01	0.90⅝-0.95¾
May 1920.....	2.15 –	2.12 –	2.08 –	2.02 –	1.91 –	1.81 –	1.71 –
" 1921.....	1.81¼-1.89⅜	1.78⅝-1.86¾	1.73½-1.82¼	1.58¾-1.70⅞	1.46¼-1.56⅛	1.31½-1.39⅜	1.30½-1.34
" 1922.....	1.42⅛-1.47	1.37⅝-1.42⅞	1.30¼-1.35½	1.17 -1.21¾	1.06⅝-1.10	0.94½-0.97⅝	0.82¾-0.86¼
June 1920.....	2.15 –	2.12 –	2.08 –	2.02 –	1.91 –	1.81 –	1.71 –
" 1921.....	1.85⅜-1.92¼	1.83½-1.89⅜	1.78⅝-1.83⅜	1.69⅞-1.74½	1.57¼-1.62½	1.41 -1.42½	– –
" 1922.....	1.31½-1.35½	1.27⅛-1.31	1.17¼-1.20⅜	1.05½-1.09⅝	0.96 -1.00¼	0.84⅜-0.89½	0.76½-0.80⅜
July 1920.....	2.15 –	2.12 –	2.08 –	2.02 –	1.91 –	1.81 –	1.71 –
" 1921.....	1.70½-1.85⅜	1.76½-1.83	1.73 -1.79¾	1.59½-1.63⅞	1.39¼-1.39½	1.26⅜-1.30⅞	1.15⅜-1.15⅞
" 1922.....	1.34½-1.38¼	1.30⅛-1.34⅜	1.19¾-1.23⅝	1.06 -1.10	0.97 -1.01⅜	0.87½-0.91½	0.79⅜-0.84½
August 1920....	2.42½-2.15⅞	2.39⅜-2.42⅞	2.35½-2.38⅞	2.25¾-2.28⅝	2.15½-2.17⅞	2.05⅛-2.06	1.95½-1.96
" 1921....	1.76¾-1.87½	1.72⅛-1.80⅝	1.64⅜-1.73	1.46½-1.54	1.31⅜-1.38⅛	1.17½-1.22¼	1.02 -1.05½
" 1922....	1.18⅜-1.25½	1.12⅛-1.16½	1.07⅞-1.11⅜	0.93⅛-0.96⅞	0.80⅛-0.84⅝	0.73 -0.76¼	0.63¾-0.66½
September 1920	2.71¾-2.82½	2.68½-2.79½	2.64½-2.75½	2.50 -2.61½	2.39½-2.51	– –	– –
" 1921	1.46⅜-1.59⅛	1.41½-1.54⅝	1.37¼-1.48⅛	1.28½-1.36⅜	1.16½-1.22⅞	1.04½-1.10⅞	0.95½-0.99⅞
" 1922	0.98⅜-1.03	0.97½-1.01	0.94 -0.98½	0.87⅛-0.90⅜₁₀	0.80½-0.83⅜₁₀	0.71⅜₁₀0.74⅜₁₀	0.61¼-0.64⅜₁₀

29.—Monthly Range of Average Cash Prices of Canadian Wheat at Winnipeg, basis in store Fort William-Port Arthur, 1920-22—concluded.

Date.	No. 1 Northern.	No. 2 Northern.	No. 3 Northern.	No. 4.	No. 5.	No. 6.	Feed.
Averages for—	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.
October 1920..	2.29⅛–2.40⅛	2.27 –2.38⅛	2.19½–2.30⅜	2.12 –2.23¼	2.02⅝–2.13	1.92⅜–1.99	1.82⅝–1.89½
" 1921..	1.15½–1.23½	1.13¾–1.21	1.09⅜–1.16⅝	1.03¼–1.10⅜	0.94¼–1.01⅜	0.85 –0.91⅝	0.75 –0.81⅝
" 1922..	0.98¼–1.02¾	0.97½–1.01¾	0.93¼–0.97½	0.89¼–0.93¾	0.83¾–0.86⅞	0.76½–0.80	0.64⅜–0.68⅜
November 1920	1.98¼–2.12¾	1.97½–2.11¾	1.93⅜–2.08	1.89 –2.02	1.78½–1.91½	1.67½–1.81½	– –
" 1921	1.08 –1.13	1.05 –1.10¼	0.99½–1.04½	0.94½–0.99	0.86½–0.91⅞	0.78½–0.83½	0.69⅝–0.74⅞
" 1922	1.07⅜–1.10⅝	1.05¼–1.09½	1.02½–1.06½	0.96¼–0.99⅜	0.92 –0.95½	0.85⅝–0.89⅜	0.75½–0.78½
December 1920	1.86¾–2.00⅛	1.84 –1.97⅜	1.78⅜–1.93	1.60⅞–1.73⅜	1.47½–1.58	1.37⅜–1.44½	1.27 –1.33⅜
" 1921	1.11½–1.16½	1.05⅜–1.10⅞	0.99½–1.04	0.92½–0.96½	0.83⅜–0.87½	0.75½–0.78⅜	0.68 –0.71⅞
" 1922	1.08 –1.11	1.05⅜–1.08¾	1.02⅜–1.06	0.98¼–1.00⅝	0.92¼–0.94⅜	0.85½–0.87⅝	0.76⅛–0.78¼

30.—Weekly Range of Cash Prices of Oats at Winnipeg, basis in store Fort William-Port Arthur, 1922.

(Per bushel of 34 lb.)

SOURCE: BOARD OF GRAIN COMMISSIONERS FOR CANADA.

Date.	No. 2 C.W.	No. 3 C.W.	No. 1 Feed Ex.	No. 1 Feed.	No. 2 Feed.
1922.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.
January 7	0 40⅛–0 42⅛	0 37⅛–0 39⅛	0 37⅛–0 39⅛	0 35⅛–0 37¼	0 33⅛–0 36⅞
" 14	0 41½–0 43⅝	0 38⅜–0 40⅝	0 38⅜–0 40⅝	0 36½–0 38⅝	0 36¼–0 37⅝
" 21	0 43⅜–0 44⅛	0 40⅝–0 40⅞	0 40⅛–0 40⅞	0 37⅞–0 38½	0 36⅞–0 38⅝
" 28	0 44⅛–0 45¾	0 40⅞–0 42⅜	0 40⅞–0 42⅜	0 38⅜–0 41⅛	0 38⅛–0 40
Average	**0 42¼–0 43⅞**	**0 39¼–0 40⅞**	**0 39⅛–0 40⅞**	**0 37 –0 38⅞**	**0 36⅛–0 38**
February 4	0 44⅞–0 45⅛	0 41⅞–0 42⅝	0 41⅞–0 42⅝	0 40⅜–0 41	0 38⅞–0 39⅞
" 11	0 46⅛–0 47⅞	0 43 –0 44⅜	0 43 –0 44⅜	0 41½–0 43½	0 39⅜–0 40⅝
" 18	0 49⅛–0 50⅝	0 45⅜–0 46⅜	0 45⅞–0 46⅞	0 45 –0 46	0 41⅞–0 43
" 25	0 50⅜–0 51½	0 46⅛–0 47¼	0 46⅛–0 47¼	0 45⅜–0 46½	0 42⅜–0 43½
Average	**0 47¼–0 48⅞**	**0 44½–0 45¼**	**0 44¼–0 45¼**	**0 43– 0 44¼**	**0 40⅜–0 41⅞**
March 4	0 52 –0 52⅜	0 46⅜–0 48½	0 46⅜–0 48½	0 46 –0 47⅜	0 42⅜–0 44⅜
" 11	0 48¾–0 52⅝	0 44 –0 47⅝	0 44 –0 47⅝	0 43½–0 46⅝	0 40¼–0 43⅞
" 18	0 48 –0 50	0 43½–0 45¼	0 43¾–0 45¼	0 42½–0 44¼	0 39½–0 41¼
" 25	0 48½–0 49½	0 43⅛–0 44⅝	0 43⅜–0 45⅝	0 43 –0 43⅝	0 39¼–0 40⅛
Average	**0 49¼–0 51¼**	**0 44½–0 46⅜**	**0 44⅓–0 46½**	**0 43¾–0 45⅓**	**0 40½–0 42⅜**
April 1	0 46⅞–0 48¾	0 42½–0 43⅜	0 42⅜–0 44	0 41⅛–0 43½	0 38⅛–0 40
" 8	0 47⅜–0 48	0 42½–0 43⅜	0 43 –0 44½	0 41⅝–0 42⅝	0 38⅜–0 39⅜
" 15	0 48½–0 50⅞	0 44½–0 46½	0 44⅜–0 47½	0 43 –0 45	0 40½–0 42⅝
" 22	0 50⅛–0 54½	0 45⅜–0 49⅜	0 46½–0 49⅜	0 44½–0 47½	0 41½–0 45½
" 29	0 52⅜–0 53⅞	0 48⅜–0 49⅜	0 48⅜–0 49½	0 46⅝–0 47⅝	0 44⅜–0 45⅜
Average	**0 49 –0 51⅝**	**0 44⅜–0 46⅝**	**0 45 –0 47**	**0 43½–0 45½**	**0 40½–0 42⅜**
May 6	0 53 –0 54½	0 49⅜–0 50½	0 49⅜–0 50⅝	0 47⅜–0 48⅞	0 45½–0 46⅜
" 13	0 54½–0 56⅛	0 50½–0 52⅞	0 50⅜–0 53⅛	0 48– 0 50⅜	0 46½–0 48½
" 20	0 54⅜–0 56½	0 51⅝–0 53⅜	0 51⅜–0 53⅞	0 49½–0 51½	0 47⅛–0 49½
" 27	0 53⅜–0 55⅜	0 50⅜–0 52⅞	0 50⅜–0 52⅞	0 48⅜–0 50⅜	0 46⅜–0 48⅛
Average	**0 53⅞–0 55⅜**	**0 50½–0 52½**	**0 50½–0 52⅝**	**0 48½–0 50⅝**	**0 46½–0 48¼**
June 3	0 53½–0 55⅝	0 50⅜–0 52⅜	0 50⅜–0 52⅜	0 48½–0 50⅞	0 45⅜–0 47⅞
" 10	0 52½–0 54	0 50 –0 52	0 50 –0 52	0 47⅜–0 50½	0 45 –0 46⅞
" 17	0 51⅜–0 52⅔	0 49⅛–0 50⅓	0 49⅜–0 50½	0 46¼–0 48⅓	0 43⅜–0 45⅓
" 24	0 50 –0 52½	0 47½–0 49⅔	0 47½–0 49⅔	0 45 –0 47½	0 42½–0 44⅔
" 30	0 50⅔–0 52⅜	0 48¼–0 49⅔	0 48½–0 49⅞	0 45⅔–0 47⅜	0 43 –0 44⅝
Average	**0 51½–0 53⅝**	**0 49 –0 51**	**0 49 –0 51**	**0 46⅜–0 48⅔**	**0 43½–0 46**

30.—Weekly Range of Cash Prices of Oats at Winnipeg, basis in store Fort William-Port Arthur, 1922—concluded.

Date.	No. 2 C.W.	No. 3 C.W.	No. 1 Feed Ex.	No. 1 Feed.	No. 2 Feed.
1922.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.
July 8	0.51½–0.53½	0.48½–0.51	0.48½–0.50½	0.46½–0.48½	0.44 –0.46½
" 15	0.50½–0.51½	0.47½–0.48½	0.47½–0.48½	0.45½–0.46½	0.42½–0.43½
" 22	0.50½–0.50½	0.47½–0.47½	0.47½–0.47½	0.45½–0.45½	0.42½–0.42½
" 29	0.49⅝–0.51	0.46⅝–0.48	0.46⅝–0.48	0.44⅝–0.46	0.41⅝–0.43
Average	**0.50½–0.51½**	**0.47½–0.48⅞**	**0.47½–0.48⅛**	**0.45½–0.46⅛**	**0.42⅝–0.44**
August 5	0.46– 0.49½	0.43 –0.44⅞	0.43 –0.44⅞	0.40½–0.41	0.37½–0.38⅞
" 12	0.45⅝–0.48	0.39½–0.42⅝	0.39½–0.42⅝	0.36½–0.38⅝	0.34½–0.36⅞
" 19	0.43⅝–0.46⅜	0.37⅞–0.40⅝	0.37⅞–0.40⅝	0.35⅝–0.36⅜	0.33⅝–0.34⅞
" 26	0.43⅜–0.44⅝	0.40⅜–0.41¼	0.39⅜–0.41¼	0.36½–0.37⅛	0.34½–0.35¼
Average	**0.44⅛–0.47⅛**	**0.40⅛–0.42¼**	**0.39⅞–0.42¼**	**0.37⅛–0.38⅜**	**0.34⅛–0.36⅜**
September 2	0.44⅜–0.45½	0.40⅜–0.41½	0.40 –0.40⅞	0.37 –0.37⅜	0.35 –0.35⅜
" 9	0.45⅜–0.47⅜	0.41⅜–0.42⅜	0.41¼–0.42⅝	0.37½–0.39⅜	0.35½–0.37½
" 16	0.44⅜–0.46	0.41⅜–0.42½	0.41⅜–0.42½	0.37⅝–0.39	0.35⅝–0.37
" 23	0.44¼–0.48½	0.41¼–0.45½	0.41¼–0.43½	0.37¼–0.41½	0.35¼–0.38½
" 31	0.43 –0.43¾	0.41 –0.42⅝	0.41 –0.42⅜	0.38½–0.39¾	0.35½–0.36¾
Average	**0.44⅛–0.46⅛**	**0.41⅛–0.43**	**0.41 –0.42⅜**	**0.37⅜–0.39½**	**0.35⅜–0.37**
October 7	0.42 –0.44	0.40 –0.41	0.40 –0.41	0.38 –0.39½	0.35 –0.36½
" 14	0.43 –0.46½	0.40 –0.43	0.40 –0.43	0.38½–0.40¼	0.35½–0.37¼
" 21	0.40⅜–0.45	0.37⅜–0.42	0.37⅜–0.42	0.35¼–0.39	0.31⅞–0.36
" 28	0.42¼–0.45½	0.38½–0.41¼	0.38½–0.41¼	0.36½–0.38¾	0.33¼–0.34⅜
Average	**0.41⅞–0.45⅛**	**0.39 –0.41¾**	**0.39 –0.41¾**	**0.37 –0.39⅜**	**0.33⅞–0.36⅛**
November 4	0.44⅜–0.46⅞	0.40⅛–0.41½	0.40⅛–0.41½	0.37⅝–0.38⅞	0.33 –0.34⅜
" 11	0.46¼–0.46⅞	0.40½–0.40⅝	0.40½–0.40⅝	0.37½–0.37¼	0.34⅝–0.35⅜
" 18	0.45⅞–0.51⅞	0.40½–0.45⅜	0.40⅜–0.45⅜	0.37¼–0.41⅞	0.35¼–0.40⅜
" 25	0.48¼–0.50⅜	0.42¼–0.44½	0.42½–0.44⅝	0.40 –0.41	0.38¼–0.39½
Average	**0.46½–0.49**	**0.40⅞–0.43**	**0.40¾–0.43**	**0.38⅛–0.39⅞**	**0.35⅛–0.37½**
December 2	0.46⅜–0.48⅜	0.41⅛–0.44	0.41⅛–0.43⅜	0.37⅝–0.41½	0.34⅝–0.38⅞
" 9	0.45⅞–0.46⅝	0.40 –0.41⅜	0.40 –0.41⅜	0.37¼–0.39½	0.34¼–0.36⅜
" 16	0.45⅜–0.48⅛	0.40⅞–0.43	0.40⅞–0.43	0.38¼–0.40⅝	– –
" 23	0.46⅜–0.47¼	0.42⅝–0.43⅝	0.42⅝–0.43⅜	0.40½–0.41¼	0.38⅛–0.39
" 30	0.47¼–0.48⅛	0.43 –0.44½	0.43 –0.44½	0.41 –0.42¼	0.38½–0.39½
Average	**0.46¼–0.47¾**	**0.41⅜–0.43½**	**0.41⅜–0.43½**	**0.39 –0.41**	**0.36⅜–0.38½**

31.—Weekly Range of Cash Prices of Barley and Flax seed at Winnipeg, basis in store Fort William-Port Arthur, 1922.

Date.	Barley (per bushel of 48 lb.)				Flax seed (per bushel of 56 lb.)		
	No. 3 C.W.	No. 4 C.W.	Rejected.	Feed.	No. 1 N.W.C.	No. 2 C.W.	No. 3 C.W.
1922.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.
January 7	0.51⅜–0.54⅞	0.46½–0.50⅞	0.37⅜–0.41½	0.37⅜–0.41½	1.72½–1.76½	1.68½–1.72½	1.43¾–1.47½
" 14	0.54½–0.55½	0.50⅝–0.52½	0.41½–0.42⅝	0.41½–0.42⅝	1.71½–1.77⅞	1.67½–1.73½	1.42½–1.48⅜
" 21	0.54¼–0.55⅜	0.51¼–0.52⅝	0.42⅝–0.45	0.42⅝–0.45	1.77½–1.82⅝	1.73½–1.75⅝	1.48½–1.54⅝
" 28	0.54½–0.56⅞	0.51 –0.53½	0.44½–0.48⅜	0.44½–0.48⅜	1.81½–1.91	1.77½–1.87	1.53½–1.61½
Average	**0.53¾–0.55¾**	**0.50 –0.52¼**	**0.41½–0.44½**	**0.41½–0.44½**	**1.75⅝–1.82**	**1.71⅝–1.77½**	**1.46¼–1.53**
February 4	0.55½–0.56¾	0.51⅞–0.53⅜	0.44⅜–0.47½	0.44⅜–0.46⅞	1.90½–1.98½	1.86½–1.94½	1.61 –1.70½
" 11	0.57½–0.60¼	0.53⅜–0.57½	0.46⅜–0.50	0.46⅜–0.50	2.05⅜–2.20½	2.01½–2.22	1.77 –1.98½
" 18	0.61⅜–0.63½	0.58⅜–0.60¼	0.51½–0.53	0.51½–0.53	2.29½–2.42	2.24½–2.35½	2.01½–2.14
" 25	0.63⅜–0.66½	0.60½–0.63⅞	0.53⅜–0.56½	0.53⅜–0.55⅜	2.36 –2.43½	2.31½–2.38½	2.07¼–2.14½
Average	**0.59½–0.61⅜**	**0.56½–0.58⅜**	**0.49 –0.51¾**	**0.48½–0.51⅜**	**2.15½–2.27⅜**	**2.11 –2.22⅜**	**1.86¼–1.99⅜**

31.—Weekly Range of Cash Prices of Barley and Flax seed at Winnipeg, basis in store Fort William-Port Arthur, 1922—concluded.

Date.	Barley (per bushel of 48 lb.)				Flax seed (per bushel of 56 lb.)		
	No. 3 C.W.	No. 4 C.W.	Rejected.	Feed.	No. 1 N.W.C.	No. 2 C.W.	No. 3 C.W.
1922.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.
March 4	0.65¼–0.67¼	0.62½–0.64½	0.55⅛–0.56⅜	0.55⅛–0.56⅜	2.36 –2.41⅜	2.31 –2.36¾	2 07– 2.12⅜
" 11	0.63½–0.65½	0.60½–0.63½	0.54⅜–0.57½	0.54⅜–0.56⅜	2.37½–2.40	2.32½–2.35	2.08 –2.10½
" 18	0.63 –0.65⅜	0.60 –0.62⅜	0.54⅛–0.56⅞	0.54½–0.56⅞	2.31½–2.37⅞	2.26½–2.32⅞	2 01⅜–2.10⅜
" 25	0.64⅜–0.65⅝	0.61⅜–0.62⅝	0.56½–0.57⅜	0.56¼–0.57⅛	2.29⅝–2.35½	2.24½–2.30½	2.05½–2.10½
Average	**0.64 –0.66**	**0.61⅛–0.63⅛**	**0.55½–0.57**	**0.55⅛–0.56¼**	**2.33⅛–2.38¼**	**2.28½–2.33¾**	**2.05½–2.11**
April 1	0.64½–0.65½	0.61½–0.62½	0.55¾–0.57	0.55⅜–0.57	2.20¾–2.30½	2.16½–2.24¾	2 02½–2.10⅜
" 8	0.64½–0.64⅞	0.61½–0.62¼	0.56¾–0.57	0.56⅜–0.57	2.20½–2.25	2.16½–2.21¼	2.01¾–2.06½
" 15	0.65⅛–0.67⅛	0.62½–0.65½	0.57⅛–0.59⅞	0.57⅜–0.59½	2.27¼–2.35¾	2.24 –2.31¾	2.09 –2.16⅝
" 22	0.66¾–0.69⅜	0.64½–0.66⅝	0.59 –0.62⅝	0.58½–0.61⅜	2.35 –2.50	2.31⅝–2.47	2.15⅝–2.30
" 29	0.68⅜–0.69½	0.66⅜–0.67½	0.60⅜–0.62½	0.59⅜–0.61½	2.42½–2.49¼	2.39½–2.46½	2.22½–2.29⅛
Average	**0.65¾–0.67½**	**0.63¼–0.6 1/10**	**0.58¼–0.59⅜**	**0.57⅜–0.59½**	**2.29 3/10–2.38**	**2.25⅝–2.35¼**	**2.10¼–2.18½**
May 6	0.67½–0.69½	0.65½–0.67½	0.60½–0.61¼	0.59½–0.60½	2.46 –2.50	2.42 –2.46	2.26 –2.30
" 13	0.67⅜–0.69¾	0.65⅜–0.67¼	0.61⅜–0.63⅜	0.59⅜–0.61⅞	2.54½–2.48	2.41½–2.44	2.21½–2.28
" 20	0.68 –0.69½	0.65½–0.67	0.62¼–0.63½	0.60¼–0.61½	2.44½–2.49½	2.40½–2.45½	2.24½–2.29½
" 27	0.67 –0.68½	0.64½–0.66½	0.61¼–0.62¾	0.59½–0.60¾	2.39½–2.41¾	2.35½–2.37⅞	2.19½–2.21¾
Average	**0.67⅜–0.69¼**	**0.65¼–0.67**	**0.61⅜–0.63⅛**	**0.59½–0.61**	**2.46¼–2.47⅜**	**2.40 –2.43⅜**	**2.23 –2.27⅜**
June 3	0.64 –0.68⅜	0.61⅜–0.65⅞	0.58⅓–0.63⅛	0.56½–0.61½	2.32½–2.38	2.28½–2.34	2.12½–2.18
" 10	0.65½–0.67½	0.63½–0.65	0.60⅜–0.62½	0.58⅜–0.60¼	2.22 –2.32⅝	2.17 –2.28⅜	2.02 –2.14⅜
" 17	0.63¼–0.64⅜	0.62 –0.63⅜	0.58⅜–0.60¼	0.56⅜–0.58½	2.15 –2.45½	2.09½–2.34½	1.92½–2.20½
" 24	0.63½–0.66½	0.62½–0.65⅞	0.59 –0.62½	0.58 –0.61⅜	2.37½–2.44	2.31⅜–2.38	2.16⅜–2.23
" 30	0.64½–0.66½	0.63½–0.65⅜	0.60¼–0.61⅞	0.59½–0.61½	2.40½–2.47	2.34½–2.39	2.19½–2.24
Average	**0.64½–0.66⅜**	**0.62⅝–0.65½**	**0.59½–0.62**	**0.56 –0.60⅜**	**2.29½–2.41⅜**	**2.25¼–2.34⅝**	**2.08⅜–2.16**
July 8	0.65½–0.65⅝	0.63 –0.64⅝	0.60 –0.61⅜	0.59 –0.60⅝	2.38½–2.42⅜	2.33½–2.37⅝	2.18½–2.22⅜
" 15	0.63½–0.64⅜	0.60½–0.61½	0.58 –0.59½	0.57¼–0.59	2.41 –2.44½	2.35 –2.39⅝	2.20 –2.23½
" 22	0.64 –0.64⅞	0.61½–0.62⅞	0.58⅜–0.59⅝	0.58⅓–0.59⅜	2.39⅞–2.47	2.34½–2.41½	2.16 –2.23
" 29	0.63½–0.65½	0.61 –0.63½	0.56½–0.58½	0.56½–0.58½	2.36 –2.41½	2.34 –2.36½	2.05 –2.17½
Average	**0.64 –0.65¼**	**0.61½–0.63¼**	**0.58¼–0.59¾**	**0.57¼–0.59¼**	**2.38⅝–2.43⅞**	**2.34⅛–2.38⅝**	**2.14⅞–2.21⅜**
August 5	0.58 –0.61⅞	0.57 –0.58⅞	0.52 –0.52⅞	0.52 –0.52⅞	2.13½–2.20½	2.09¼–2.16½	1.93½–2.00½
" 12	0.55½–0.60½	0.53½–0.57⅜	0.48½–0.51½	0.48½–0.51½	2.01½–2.14½	1.96½–2.08½	1.81½–1.94½
" 19	0.54½–0.55½	0.50½–0.51⅜	0.46¾–0.47½	0.46½–0.47⅜	2.02½–2.08	1.97½–2.03	1.80⅝–1.86
" 26	0.55 –0.55⅜	0.51 –0.51¼	0.47 –0.47¾	0.47 –0.47⅜	1.87¼–2.07½	1.83⅓–2.02½	1.70 –1.80½
Average	**0.55½–0.58½**	**0.53 –0.55**	**0.48½–0.50**	**0.48½–0.50**	**2.01¼–2.12½**	**1.96½–2.07½**	**1.81¼–1.90¼**
September 2	0.54½–0.55½	0.50½–0.51⅜	0.46⅔–0.47⅜	0.46⅔–0.47¼	1.90 –1.93½	1.86 –1.89½	1.70 –1.73½
" 9	0.54⅝–0.57½	0.51½–0.54½	0.47½–0.49½	0.47½–0.49½	1.94½–2.03½	1.90½–1.97½	1.74½–1.85½
" 16	0.54½–0.57⅜	0.51½–0.54⅝	0.47⅜–0.49⅝	0.47⅜–0.49⅝	1.93 –2.01	1.89 –1.97	1.77 –1.85
" 23	0.54¼–0.56⅜	0.52¼–0.55½	0.49¼–0.51⅜	0.49¼–0.51⅜	2.08 –2.17½	2.04 –2.13¼	1.91 –2.01½
" 30	0.52½–0.54½	0.51 –0.53⅜	0.47 –0.47⅞	0.47 –0.47⅞	1.99 –2.06	1.95 –2.02	1.83 –1.88⅜
Average	**0.53⅜–0.56**	**0.51¼–0.54**	**0.47⅜–0.49½**	**0.47⅜–0.49½**	**1.97 –2.04¼**	**1.93 –1.99⅝**	**1.79 3/10–1.86¾**
October 7	0.52 –0.53	0.51 –0.52	0.47½–0.48½	0.47½–0.48½	1.97½–2.00	1.93½–1.94½	1.82¼–1.84½
" 14	0.52½–0.54½	0.48⅞–0.51	0.46⅞–0.48⅞	0.46⅞–0.48⅞	1.97½–2.07½	1.92 –2.01½	1.81 –1.90½
" 21	0.51⅝–0.53⅝	0.46½–0.49⅜	0.42⅝–0.46⅜	0.42⅝–0.46⅜	2.13 –2.16	2.09 –2.12	1.83 –1.99
" 28	0.51½–0.52½	0.46½–0.47½	0.42⅝–0.43½	0.42⅝–0.43½	2.15½–2.40	2.11½–2.36	1.73 –1.91½
Average	**0.51⅞–0.53¼**	**0.48⅜–0.50**	**0.44⅛–0.46⅞**	**0.44⅛–0.46⅞**	**2.06 –2.15⅞**	**2.01½–2.11**	**1.80 –1.91¼**
November 4	0.51½–0.52⅞	0.46½–0.48¼	0.40¾–0.42⅝	0.40½–0.42⅝	2.17½–2.45	2.12 –2.41	1.76 –1.82
" 11	0.52½–0.53½	0.48 –0.48⅜	0.41⅞–0.42½	0.41½–0.42½	2.02 –2.21	1.98 –2.14	1.64 –1.80
" 18	0.52¼–0.56⅞	0.48 –0.52⅞	0.41⅞–0.49½	0.41⅞–0.49⅜	2.04½–2.10½	2.00⅛–2.06	1.64½–1.66¾
" 25	0.52½–0.55½	0.49 –0.51½	0.45½–0.47¼	0.45½–0.47¼	1.99½–2.07½	1.95 –2.03	1.56½–1.63¾
Average	**0.52⅜–0.54⅝**	**0.47⅞–0.50½**	**0.42⅝–0.45½**	**0.42⅝–0.45½**	**2.05½–2.21**	**2.01½–2.16**	**1.65½–1.73⅛**
December 2	0.52⅛–0.54½	0.48⅜–0.49½	0.44¼–0.46⅜	0.44¼–0.46⅜	1.97 –2.02½	1.89 –1.98½	1.53 –1.63¾
" 9	0.53½–0.55⅜	0.49 –0.50⅜	0.44 –0.45⅞	0.44 –0.45⅞	1.97½–2.04	1.93 –1.98	1.54½–1.66¼
" 16	0.54½–0.55½	0.49½–0.50¼	0.43⅜–0.44½	0.43⅜–0.44½	2.07 –2.17½	2.01 –2.12½	1.63 –1.76½
" 23	0.55 –0.56	0.50 –0.51	0.44½–0.46	0.44½–0.46	2.07 –2.10½	2.02½–2.06½	1.70 –1.77
" 30	0.55¼–0.57⅜	0.50¾–0.52¾	0.46⅜–0.47¾	0.46⅜–0.47¾	2.09¾–2.15½	2.02¼–2.11	1.74¾–1.85
Average	**0.54½–0.55¼**	**0.49½–0.50⅝**	**0.44½–0.46 3/10**	**0.44½–0.46½**	**2.03⅛–2.10**	**1.97⅛–2.05½**	**1.63 3/10–1.73½**

32.—Monthly Range of Average Cash Prices of Barley, Oats and Flax seed at Winnipeg, basis in store Fort William-Port Arthur, 1920-1922.

Date.	Barley (per bushel of 48 lb.)	Oats (per bushel of 34 lb.)				Flax seed (per bushel of 56 lb.)		
	No. 3 C.W.	No. 2 C.W.	No. 3 C.W.	No. 1 Feed.	No. 2 Feed.	No. 1 N.C.W.	No. 2 C.W.	No. 3 C.W.
Averages for—	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.
Jan. 1920.	1.72 -1.75½	0.72½-0.94½	0.88⅛-0.91⅜	0.86½-0.89	0.83½-0.85½	4.87⅜-4.85½	4.77⅜-4.89⅜	4.45⅜-4.57½
1921.	0.88 -0.93⅜	0.50⅜-0.52⅞	0.47 -0.49¼	0.44⅝-0.47½	0.41½-0.44½	1.94 -2.05½	1.90 -2.01½	1.66⅜-1.76½
1922.	0.53½-0.55½	0.42¼-0.43⅜	0.39½-0.40⅝	0.37 -0.38½	0.36½-0.38	1.75⅛-1.82	1.71⅛-1.77⅛	1.46¼-1.53
Feb. 1920.	1.67 -1.76¾	0.93 -0.96¾	0.89½-0.93⅝	0.87½-0.91½	0.85½-0.89¾	5.07⅞-5.26½	4.80⅝-4.99¼	4.46½-4.65½
1921.	0.80 -0.84⅜	0.47⅛-0.50	0.43⅞-0.45⅞	0.41½-0.43⅞	0.38⅜-0.40⅝	1.76⅞-1.85	1.72⅛-1.81	1.48⅜-1.56⅜
1922.	0.59½-0.61⅜	0.47¼-0.48⅞	0.44½-0.45¼	0.43 -0.44¼	0.40⅜-0.41¾	2.15½-2.27⅝	2.11 -2.22⅜	1.86¾-1.99⅜
Mar. 1920.	1.68½-1.73½	0.97½-0.99½	0.94½-0.96¼	0.94½-0.95½	0.92½-0.94½	5.27 -5.53½	5.17⅜-5.44½	4.76½-5.04½
1921.	0.81½-0.85	0.48⅛-0.49½	0.43⅜-0.44⅜	0.42⅜-0.42½	0.38⅜-0.39⅞	1.74½-1.78⅜	1.70½-1.74½	1.45⅜-1.49¼
1922.	0.64 -0.66	0.49¼-0.51¼	0.44½-0.46⅜	0.43¾-0.45½	0.40½-0.42⅜	2.33⅜-2.38½	2.28½-2.33¼	2.05½-2.11
April 1920.	1.67½-1.73⅞	0.97⅜-1.00½	0.94½-0.97	0.93¼-0.96	0.92½-0.94⅞	5.26⅞-5.49⅝	5.18⅜-5.40⅞	4.70⅞-5.00⅞
1921.	0.74½-0.78½	0.42⅜-0.45⅜	0.37⅜-0.40½	0.35½-0.38½	0.33¼-0.36⅜	1.46½-1.58⅜	1.42 -1.53½	1.15⅜-1.27⅜
1922.	0.65⅜-0.67½	0.49 -0.51⅞	0.44⅛-0.46⅛	0.43½-0.45½	0.40⅜-0.42⅞	2.29⁹⁄₁₀-2.38	2.25⅜-2.35½	2.10½-2.18½
May 1920.	1.78⅛-1.82½	1.16½-1.20⅜	1.15½-1.17½	1.12½-1.15⅞	1.10 -1.13½	4.84⅞-5.05⅞	4.82½-5.01⅜	4.17⅜-4.35⅞
1921.	0.75½-0.79	0.43¼-0.46	0.39⅝-0.42	0.37⅝-0.40	0.35⅛-0.38⅞	1.64⅜-1.73⅛	1.60 -1.69½	1.32 -1.41⅜
1922.	0.67⅜-0.69¼	0.53⅞-0.55⅜	0.50½-0.52½	0.48½-0.50⅜	0.46½-0.48½	2.46½-2.47⅜	2.40 -2.43⅜	2.23 -2.27⅜
June 1920.	1.90½-1.93⅜	1.25½-1.33½	1.25 -1.33½	1.24½-1.32⅜	– –	4.23⅜-4.39¼	4.19⅝-4.35½	3.69⅝-3.84
1921.	0.77¼-0.80½	0.47⅜-0.49⅜	0.43 -0.44¼	0.40⅜-0.42½	0.40½-0.42	1.77½-1.84	1.73⅜-1.80	1.47⅜-1.55
1922.	0.64½-0.66⅜	0.51⅛-0.53⅜	0.49 -0.51	0.46⅜-0.48¾	0.43½-0.46	2.29½-2.41⅞	2.25¼-2.34⅛	2.08½-2.16
July 1920.	1.63½-1.74½	1.12⅜-1.22	1.10½-1.20½	1.09 -1.18⅞	– –	3.63⅜-3.82⅜	3.59⅜-3.78½	3.09⅛-3.29½
1921.	0.78¼-0.82½	0.49⅜-0.52⅜	0.47 -0.49¼	0.44½-0.47⅜	0.43⅜-0.46¾	1.86½-1.93⅛	1.82½-1.89¼	1.56½-1.63⅜
1922.	0.64 -0.65¼	0.50½-0.51¾	0.47½-0.48⅞	0.45½-0.46⅛	0.42⅜-0.44	2.38⅞-2.43⅜	2.34⅛-2.38⅛	2.14⅛-2.21⅜
Aug. 1920.	1.37⅝-1.43½	0.94½-0.98½	0.93 -0.96½	0.82½-0.91⅞	0.85⅞-0.88⅞	4.70⅜-3.53⅜	3.39½-3.47⅜	2.96 -3.05⅞
1921.	0.76⅛-0.79⅜	0.47⅜-0.50	0.47 -0.49	0.46 -0.48½	0.44⅜-0.46⅜	1.96 -2.04½	1.92⅝-2.01	1.66 -1.73½
1922.	0.55¾-0.58½	0.44½-0.47⅜	0.40⅜-0.42¼	0.37½-0.38⅜	0.34⅜-0.36⅜	2.01¼-2.12½	1.96¾-2.07½	1.81¼-1.90¼
Sept. 1920.	1.20⅜-1.26⅜	0.85⅛-0.86½	0.77⅛-0.85	0.76½-0.83⅜	0.67½-0.82	3.39½-3.52⅜	3.33½-3.45½	3.03¼-3.17½
1921.	0.70¼-0.74	0.46⅜-0.48⅝	0.44 -0.46	0.42½-0.44⅛	0.40⅜-0.43	1.96½-2.04½	1.92⅝-2.00⅛	1.67⅜-1.76½
1922.	0.53⅜-0.56	0.44¼-0.46½	0.41¼-0.43	0.37⅜-0.39½	0.35½-0.37	1.97 -2.04½	1.93 -1.99½	1.79½-1.86⅜
Oct. 1920.	1.11½-1.17⅜	0.70½-0.74⅝	0.66½-0.68½	0.63½-0.67½	0.61 -0.64	2.92½-3.06½	2.88⅝-3.02½	2.52⅜-2.65½
1921.	0.56 -0.59⅛	0.41¼-0.43½	0.38⅝-0.40⅜	0.36½-0.39	0.34½-0.36⅜	1.78⅝-1.87	1.74⅜-1.83	1.48⅜-1.57⅜
1922.	0.51⅜-0.53¼	0.41⅜-0.45½	0.39 -0.41¼	0.37 -0.39⅜	0.33⅞-0.36⅛	2.06 -2.15⅞	2.01½-2.11	1.80 -1.91¼
Nov. 1920.	0.98 -1.11	0.59½-0.64½	0.54½-0.59	0.51¼-0.55½	0.48½-0.52	2.19⅛-2.42½	2.15 -2.38½	1.82½-2.04⅜
1921.	0.55⅛-0.58½	0.41⅜-0.43⅞	0.39½-0.41½	0.37½-0.39½	0.34½-0.37½	1.17½-1.76½	1.67½-1.72¼	1.41¼-1.46⅜
1922.	0.52⅜-0.54⅝	0.46½-0.49	0.40⅜-0.43	0.38¼-0.39⅜	0.35¼-0.37½	2.05½-2.21	2.01¼-2.16	1.65⅛-1.73⅛
Dec. 1920.	0.91⅜-1.01	0.52½-0.56	0.49½-0.52⅛	0.46½-0.49½	0.43½-0.46	1.96½-2.07	1.92½-2.02⅛	1.61¼-1.72½
1921.	0.54⅛-0.56½	0.42¼-0.44⅜	0.39½-0.41¼	0.37⅜-0.39⅝	0.34⅜-0.37⅛	1.70 -1.75⅛	1.66 -1.71⅜	1.40 -1.45⅛
1922.	0.54⅛-0.55⅜	0.46¼-0.47⅞	0.41⅜-0.43⅛	0.39 -0.41	0.36⅜-0.38½	2.03⅜-2.10	1.97⅜-2.05⅛	1.63⁹⁄₁₀-1.73⅛

33.—Monthly Range of Average Prices in British Markets of Canadian Wheat and Oats, 1920-1922[1].

Date.		Wheat (per bushel of 60 lb.)				Oats (per bushel of 34 lb.)
Averages for—		No. 1.	No. 2.	No. 3.	No. 4.	
		$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.
January	1920.....	2.29½ –	2.62½ –	– –	– –	1.62½-1.65½
	1921.....	3.08½-3.11¼	3.00¹/₁₆-3.03	2.86½-2.90¹/₁₀	2.95½-3.06	1.13 -1.17½
	1922.....	1.66½-1.69⅝	1.62 - 1.65	1.56 -1.59	1.53½-1.56	0.80½-0.82¼
February	1920.....	2.29½ –	2.26½- –	– –	– –	1.68¼-1.71½
	1921.....	2.81½-2.84	2.75½-2.78¹/₁₀	2.67½-2.70¼	2.60½-2.63½	1.02½-1.10½
	1922.....	1.81 -1.83¾	1.75 -1.78½	1.65 -1.72	1.66¼-1.65	0.97 -0.99⅝

[1]Prices converted at par of exchange.

33.—Monthly Range of Average Prices in British Markets of Canadian Wheat and Oats, 1920-1922[1]—concluded.

Date.		Wheat (per bushel of 60 lb.)				Oats (per bushel of 34 lb.)
		No. 1.	No. 2.	No. 3.	No. 4.	
Averages for—		$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.	$ c. $ c.
March	1920	2.48⅜– –	2.40½– –	– –	– –	1.61¼–1.64
	1921	2.79⅜–2.82½	2.75¼–2.78½	2.67⅜–2.70¾	2.62 –2.65	– –
	1922	1.97⅛–2.02⅜	1.90 –1.95	1.84⁷⁄₁₀–1.87⅜	1.78½–1.81¾	0.92⅝–0.96¼
April	1920	2.78⅞– –	2.76 –	– –	– –	1.39 –1.44⅜
	1921	2.71½–2.74½	2.68⅜–2.71½	2.61¼–2.64½	2.56 –2.59	– –
	1922	1.86⅜–1.89⅝	1.84 –1.85⅜	1.78 –1.81	1.72 –1.75	0.76¼–0.78⅝
May	1920	2.79⅜ –	2.76¾ –	– –	– –	1.48½–1.53⅜
	1921	2.75 –2.77⅝	2.72 –2.75	2.66 –2.69	2.61⅞–2.65	– –
	1922	1.87½–1.93	1.84½–1.87½	1.73 –1.76⅜	1.67 –1.70	0.79 –0.81½
June	1920	2.79⅜ –	2.76⅜ –	– –	– –	1.62⅞–1.65½
	1921	2.69½–2.72½	2.66½–2.69	2.62 –2.64½	2.50⅝–2.53½	– –
	1922	1.76⅜–1.78⅝	1.73 –1.75⅝	1.62⅝–1.65¼	1.59⅝–1.62½	0.80¼–0.82¾
July	1920	2.79⅜– –	2.76⅜ –	– –	– –	1.62⅝–1.65½
	1921	2.61½–2.64½	2.58½–2.60⅝	2.53½–2.55½	2.39 –2.41⅜	0.80¼–0.86
	1922	1.80⅝–1.83⁹⁄₁₀	1.75⅜–1.78⅜	1.62½–1.66¼	1.58 –1.60⅝	0.80¼–0.82¾
August	1920	2.83½– –	2.80⅝ –	2.76½ –	2.72 –	1.62¾–1.65½
	1921	2.70⅛–2.73⅝	2.67⅝–2.70⅝	2.60½–2.63½	2.57½–2.60½	0.92½–0.98⅝
	1922	1.76¼–1.79⅛	1.70½–1.73⅝	1.64¼–1.67⅜	1.61½–1.64	0.75⅝–0.78¼
September	1920	2.85⅜– –	2.82⅜ –	2.76¾ –	2.73¼ –	1.62¾–1.65½
	1921	2.77½–2.80⅜	– –	– –	– –	0.97⅜–1.00½
	1922	1.49¼–1.53⅛	1.47 –1.50¾	1.42 –1.44⁹⁄₁₀	1.39 –1.41¾	0.75 –0.77½
October	1920	3.10½–3.62	3.05⅝–3.53¼	2.97⅛–3.44⅞	2.94⅛–3.38½	1.61½–1.63¾
	1921	2.00⁷⁄₁₀–2.06⅜	1.91⅛–1.96⅜	1.75½–1.77⅛	1.70 –1.73	0.78½–0.81
	1922	1.59⅛–1.62⅝	1.56⅜–1.59½	1.50¾–1.53⅜	1.47¼–1.50¼	0.77¼–0.80
November	1920	3.60½–3.62	3.51⅜–3.53¼	3.40 –3.44⅜	3.37 –3.38½	1.55⅜–1.58½
	1921	1.61 –1.64⅜	1.58¼–1.61	1.51⅝–1.54⅝	1.48⅝–1.51⅝	0.92 –0.94¾
	1922	1.62½–1.65½	1.59⅜–1.62½	1.53⅛–1.56⅜	1.50⅞–1.53⅝	0.80¼–0.82½
December	1920	3.34⅜–3.36⅞	3.26 –3·38½	3.14⅛–3.17⅛	3.13½–3.13½	1.21½–1.29½
	1921	1.65¼–1.68½	1.62⅜–1.65½	1.56¾–1.57⅛	1.53⅜–1.56¾	0.90½–0.93⅜
	1922	1.57¼–1.60⅛	1.54⅝–1.57½	1.48⅝–1.51⅝	1.45⁷⁄₁₀–1.48⅝	0.78¼–0.80⅞

[1]Prices converted at par of exchange.

34.—Yearly Average Prices of Home-Grown Wheat, Barley and Oats in England and Wales, 1902-1922.

Source: "London Gazette," published pursuant to Sec. 8 of the Corn Returns Act, 1882.

Years.	Wheat.		Barley.		Oats.		Years.	Wheat.		Barley.		Oats.	
	per qr.	per bush.	per qr.	per bush.	per qr.	per bush.		per qr.	per bush.	per qr.	per bush.	per qr.	per bush.
	s. d.	$ c.	s. d.	$ c.	s. d.	$ c.		s. d.	$ c.	s. d.	$ c.	s. d.	$ c.
1902	28 1	0.85	25 8	0.78	20 2	0.61	1913	31 8	0.96	27 3	0.83	19 1	0.58
1903	26 9	0.81	22 8	0.69	17 2	0.52	1914	34 11	1.06	27 2	0.83	20 11	0.64
1904	28 4	0.86	22 4	0.68	16 4	0.50	1915	52 10	1.61	37 4	1.13	30 2	0.92
1905	29 8	0.90	24 4	0.74	17 4	0.53	1916	58 5	1.78	53 6	1.56	33 5	0.39
1906	28 3	0.86	24 2	0.73	18 4	0.56	1917	75 9	2.30	64 9	1.89	49 10	1.32
1907	30 7	0.93	25 1	0.76	18 10	0.57	1918	72 10	2.22	59 0	1.72	49 4	1.31
1908	32 0	0.97	25 10	0.79	17 10	0.54	1919	72 11	2.22	75 9	2.21	52 5	1.39
1909	36 11	0.82	26 10	0.82	18 11	0.58	1920	80 10	2.46	89 5	2.60	56 10	1.51
1910	31 8	0.96	23 1	0.70	17 4	0.53	1921	71 6	2.17	52 2	1.52	34 2	0.90
1911	31 8	0.96	27 3	0.83	18 10	0.57	1922	47 11	1.46	40 3	1.18	29 1	0.77
1912	34. 9	1.06	30. 8	0.93	21 6	0.65							

35.—Average Monthly Prices of Flour, Bran and Shorts, at Principal Markets, 1922.

(SOURCE: For Montreal, Trade Bulletin; for Toronto, Dealers' quotations; for Winnipeg and U.S. cities "The Northwestern Miller," Minneapolis).

Month.	Montreal.			Toronto.			
	Flour Manitoba Standard grade.	Flour Ontario del'd at Montreal.	Bran.	Shorts.	First Patents Flour (Jute bags).	First Patents Flour (Cotton bags).	Bran.	Shorts.
1922.	Per brl.	Per brl.	Per ton.	Per ton.	Per brl.	Per brl.	Per ton.	Per ton.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
January	7.50	5.00[1]	27.25	29.25	7.50	7.70	28.25	30.25
February	7.875	5.20[1]	29.31	30.94	8.00	8.20	28.25	30.25
March	8.515	6.212[2]	32.50	33.00	8.50	8.70	28.25	30.25
April	8.50	6.26[2]	32.34	33.00	8.50	8.70	28.25	30.25
May	8.50	6.925	31.187	32.062	8.50	8.70	28.25	30.25
June	7.90	6.68[3]	26.45	28.45	7.80	8.00	28.25	30.25
July	7.81	6.16[3]	24.44	26.44	7.80	8.00	25.25	27.25
August	7.65	5.33[3]	24.58	26.75	7.80	8.00	25.25	23.25
September	7.50	5.01[3]	20.50	22.50	6.80	6.90	21.25	23.25
October	6.63	5.25[3]	20.00	22.00	6.50	6.60	20.25	22.25
November	6.97	5.48[3]	22.50	24.50	7.00	7.10	23.25	25.25
December	7.10	5.70[3]	24.00	26.00	7.10	7.20	24.25	26.25

Month.	Winnipeg.			Minneapolis.			Duluth.
	Flour.	Bran.	Shorts.	Flour.	Bran.	Shorts.	Flour.
1922.	Per brl.	Per ton.	Per ton.	Per brl.	Per ton.	Per ton.	Per brl.
	$ cts.	$ cts.	$ cts.	$ cts. $ cts.	$ cts. $ cts.	$ cts. $ cts.	$ cts. $ cts.
January	7.15	19.00	21.00	7.25 — 7.65	21.20 —21.80	20.80 —21.60	7.10 — 7.35
February	7.45	20.50	22.50	8.25 — 8.75	22.25 —25.50	25.05 —26.25	7.75 — 8.02
March	8.00	22.00	24.00	7.97 — 8.60	24.37 —26.25	26.25 —26.75	7.87 — 8.12
April	8.00	22.00	24.00	8.20 — 8.94	22.60 —23.40	23.50 —24.00	8.10 — 8.40
May	8.00	22.00	24.00	8.07 — 8.89	21.40 —22.30	22.00 —22.30	7.862— 8.40
June	7.40	21.00	23.00	7.46 — 8.19	16.12 —16.87	16.75 —17.75	7.46 — 7.79
July	7.30	20.00	22.00	7.75 — 8.21	15.62 —16.75	17.25 —18.12	7.68 — 7.88
August	7.22	20.00	22.00	7.00 — 7.39	14.75 —15.50	16.62 —17.00	7.19 — 7.44
September	6.32	17.60	19.60	6.47 — 7.17	16.75 —17.50	17.75 —18.50	6.53 — 6.78
October	6.30	17.00	19.00	6.44 — 7.07	21.80 —22.60	22.80 —24.00	6.61 — 6.86
November	6.45	17.50	19.50	6.75 — 7.36	22.63 —23.00	23.50 —24.00	7.10 — 7.35
December	6.52	18.00	20.00	6.87 — 7.42	24.60 —24.70	24.70 —24.70	7.15 — 7.35

NOTE.—The ton=2,000 lb. and the barrel=196 lb. [1]90 p.c. patent (Tor.) [2]Flour Standard Ont. in second hand jute bags at Toronto. [3]Winter Wheat, ex. track, "Trade Bulletin."

36.—Average Prices per cwt. of Canadian Live Stock at Principal Markets, 1920, 1921 and 1922.

SOURCE: Markets Intelligence Division, Live Stock Branch, Dominion Department of Agriculture.

Classification.	Toronto.			Montreal.		
	1920.	1921.	1922.	1920.	1921.	1922.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Steers—heavy finished	13·77	7·73	7·52	–	8·92	8·75
Steers—1,000-1,200 lb., good	12·89	7·58	7·14	13·08	8·24	7·00
Steers—1,000-1,200 lb., common	10·22	6·64	5·94	11·42	5·97	5·93
Steers—700-1,000 lb., good	12·27	7·24	6·81	12·34	7·55	6·71
Steers—700-1,000 lb., common	8·65	5·24	5·61	8·08	5·85	5·51
Heifers, good	12·56	7·66	6·87	11·62	7·19	6·55
Heifers, fair	8·82	6·18	5·78	8·81	5·91	5·49
Heifers, common	7·67	4·35	4·69	7·10	3·80	4·44
Cows, good	10·65	5·86	5·06	9·77	5·88	5·27
Cows, common	7·89	4·52	3·82	6·91	4·65	4·07
Bulls, good	10·46	5·55	4·55	11·13	6·98	5·83
Bulls, common	6·98	3·71	3·15	5·06	3·43	3·58
Canners and cutters	4·66	2·49	1·86	4·48	2·28	2·19
Oxen	–	–	3.50	10·30	6·27	6·50
Calves, veal	16·79	10·24	9·37	12·13	6·94	7·68
Calves, grass	8·58	3·04	3·69	6·99	2·92	3·62
Stockers—450-800 lb., good	9·02	4·87	5·24	–	–	–
Stockers—450-800 lb., fair	8.23	3·15	4·15	–	–	–
Feeders—800-1,000 lb., good	11·22	7·01	6·08	–	–	–
Feeders—800-1,000 lb., fair	10·78	3·90	5·18	–	–	–
Hogs (fed and watered), selects	18·98	11·72	12·66	19·82	12·52	13·20
Hogs (fed and watered), heavies	18·87	10·01	10·95	18·97	10·11	12·15
Hogs (fed and watered), lights	16·58	9·56	11·74	18·06	12·13	12·45
Hogs (fed and watered), sows	15·41	8·17	8·83	16·24	8·31	10·06
Hogs (fed and watered), stags	13·27	9·25	4·95	13·83	9·92	7·23
Lambs, good	13·86	9·59	12·88	12·79	8·23	10·93
Lambs, common	10·04	7·43	9·29	10·58	6·49	8·99
Sheep, heavy	8·52	4·64	4·25	–	–	6·50
Sheep, light	8·65	5·25	6·53	10·44	4·56	5·43
Sheep, common	5·36	2·91	2·97	7·17	3·37	3·93

Classification.	Winnipeg.			Edmonton.		
	1920.	1921.	1922.	1920.	1921.	1922.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Steers—heavy finished	10·12	5·41	5·28	12·28	5·27	5·10
Steers—1,000-1,200 lb., good	10·46	5·78	5·59	9·65	5·49	5·03
Steers—1,000-1,200 common	6·91	3·89	4·09	5·83	3·85	3·12
Steers—700-1,000 lb., good	9·80	5·67	5·49	8·30	4·77	4·87
Steers—700-1,000 lb., common	6·24	4·12	3·91	5·83	3·68	2·95
Heifers, good	8·36	5·19	5·43	7·68	3·58	4·30
Heifers, fair	6·42	4·04	4·29	6·18	–	3·38
Heifers, common	5·07	2.92	3·15	5·62	3·47	2·64
Cows, good	8·79	4·34	4·00	7·97	2·82	3·60
Cows, common	5·91	3·18	3·01	5·71	4·05	2·46
Bulls, good	6·31	3·32	2·84	6·14	2·96	2·31
Bulls, common	4·91	2·55	2·08	4·22	2·88	1·51
Canners and cutters	3·65	2·06	1·75	3·54	2·19	1·35
Oxen	6·30	2·87	2·83	8·88	2·04	2·32
Calves, veal	8·46	5·47	5·71	8·66	3·00	4·68
Calves, grass	–	–	–	–	3·31	–
Stockers—450-800 lb., good	6·48	3·52	3·61	7·12	3·46	3·35
Stockers—450-800 lb., fair	5·39	2·81	2·74	5·54	2·87	2·51
Feeders—800-1,000 lb., good	8·33	4·27	4·37	9·94	3·34	3·89
Feeders—800-1,000 lb., fair	6·49	3·61	3·48	–	3·06	3·16
Hogs (fed and watered), selects	18·33	12·01	11·15	18·11	10·70	10·33
Hogs (fed and watered), heavies	16·56	9·56	8·61	17·26	9·98	9·25
Hogs (fed and watered), lights	16·01	11·00	10·75	16·40	7·44	7·69
Hogs (fed and watered), stags	11·77	6·07	4·66	15·07	6·06	7·29
Hogs (fed and watered), sows	13·94	6·77	7·12	16·11	8·22	7·21
Lambs, good	11·11	8·88	10·82	9·98	7·58	9·62
Lambs, common	6·65	6·26	7·01	7·61	5·66	6·97
Sheep, heavy	–	–	–	–	–	–
Sheep, light	7·23	5·21	6·52	7·93	5·26	6·25
Sheep, common	4·81	2·98	3·50	6·73	3·54	4·07

37.—Average Monthly Prices per cwt. of Canadian Live Stock at Principal Markets, 1922.

SOURCE: Markets Intelligence Division, Live Stock Branch, Dominion Department of Agriculture.

Classification.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Montreal—												
Steers, 1,000-1,200 lb., good	7·33	7·20	7·70	8·22	8·55	8·39	7·76	6·37	6·02	5·66	5·14	5·69
Heifers, good	6·44	6·48	7·06	7·62	8·30	8·18	7·18	6·28	5·65	5·43	4·75	5·25
Calves, veal	10·06	10·72	7·00	5·56	6·14	5·28	5·23	6·82	8·50	8·45	9·13	9·30
Hogs (fed and watered), selects	12·66	13·78	13·95	14·06	14·47	14·89	15·08	13·18	12·38	11·52	11·15	11·33
Hogs (fed and watered), lights	–	–	–	14·15	–	–	13·99	12·92	12·31	11·28	11·13	11·39
Lambs, good	9·06	10·04	10·70	10·50	14·97	11·94	10·25	9·55	10·53	10·73	11·03	11·80
Sheep, light	4·43	5·92	6·63	7·68	6·81	5·15	4·38	4·34	4·29	3·93	5·33	6·29
Toronto—												
Steers, 1,000-1,200 lb., good	6·80	7·06	7·29	7·74	8·34	8·45	7·88	6·95	6·70	6·30	5·57	6·62
Heifers, good	6·40	6·63	6·93	7·51	7·95	8·27	7·51	6·86	6·44	5·95	5·50	6·48
Calves, veal	10.93	11.73	9.51	7.26	7.65	7.71	7.61	9.17	10.33	10.88	9.09	10.51
Hogs (fed and watered), selects	11·54	13·24	13·23	13·43	13·77	14·24	14·56	13·34	12·67	10·97	10·84	10·73
Hogs (fed and watered), lights	10·23	12·30	12·17	12·42	12·76	13·24	13·69	12·40	11·08	9·79	10·58	10·16
Lambs, good	12·41	13·38	13·32	13·55	15·60	15·55	12·80	11·20	11·39	11·07	12·31	11·98
Sheep, light	5·91	7·64	7·96	8·51	7·26	5·35	5·45	4·93	5·38	6·18	6·82	7·01
Winnipeg—												
Steers 1,000-1,200 lb., good	5·51	5·61	6·01	6·29	7·20	6·90	5·95	5·23	4·89	4·35	4·37	4·74
Heifers, good	5·54	5·45	5·73	6·07	7·08	6·87	6·19	5·00	4·79	4·05	3·81	4·56
Calves, veal	6·65	6·86	7·23	7·82	7·68	5·45	5·92	5·12	4·55	3·96	3·35	3·98
Hogs (fed and watered), selects	9·79	11·79	11·64	11·84	12·13	12·47	13·10	11·90	11·10	9·54	9·33	9·12
Hogs (fed and watered), lights	9·71	11·41	11·55	11·74	11·66	12·28	12·61	11·18	10·41	9·23	8·49	8·78
Lambs, good	8·47	9·01	10·78	13·48	13·87	13·33	11·24	9·23	9·44	10·37	9·83	10·77
Sheep, light	5·60	5·28	6·84	9·15	10·03	6·97	6·31	4·95	5·16	5·92	5·82	6·15
Calgary—												
Steers, 1,000-1,200 lb., good	4·71	5·00	5·00	5·08	6·05	6·50	4·89	4·47	4·25	3·98	3·78	4·13
Heifers, good	4·12	4·50	4·79	4·80	5·38	5·59	4·64	3·28	3·15	3·16	3·06	3·49
Calves, veal	4.76	5.51	5.75	5.90	6.09	5.73	4.28	3.65	3.80	3.27	2.99	3.37
Hogs, (fed and watered), selects	9·06	10·91	10·80	11·13	11·75	11·95	11·97	11·05	10·17	8·58	8·47	8·50
Hogs (fed and watered), lights	5·94	8·19	8·05	8·03	8·78	8·99	8·86	7·98	7·00	5·46	7·43	7·46
Lambs, good	8·55	9·43	10·68	11·00	11·13	12·00	9·20	10·12	10·12	10·10	9·27	9·19
Sheep, light	5·91	6·72	7·00	7·59	8·11	8·36	7·11	7·00	7·00	7·00	6·83	6·48
Edmonton—												
Steers, 1,000-1,200 lb., good	5·30	5·70	5·68	5·79	6·41	6·30	4·80	4·00	4·00	3·89	4·11	4·43
Heifers, good	4·21	4·55	4·75	5·06	6·09	5·89	3·70	3·47	3·60	3·25	3·18	3·99
Calves, veal	4·95	6·00	6·00	7·00	7·50	6·06	3·69	3·43	3·50	2·97	2·50	2·60
Hogs (fed and watered), selects	9·08	10·98	10·87	10·56	11·35	11·84	11·95	10·47	9·47	9·37	9·16	8·88
Hogs (fed and watered), lights	5·89	7·58	7·99	7·48	8·59	8·77	8·58	7·54	6·47	7·27	8·19	7·97
Lambs, good	8·51	8·75	9·13	9·83	12·09	11·89	8·10	8·93	9·64	9·64	9·62	9·25
Sheep, light	5·21	6·00	6·00	6·41	8·76	8·02	5·10	4·50	5·46	7·00	7·00	5·55

Clover and Grass Seed Prices.—A special survey of clover and grass seed prices has been undertaken annually in recent years by the Dominion Bureau of Statistics, in co-operation with the Seed Branch of the Dominion Department of Agriculture. Statistics of prices paid by farmers and to farmers for grade No. 1 clover and grass seed are given for 1923 by provinces in Tables 38 and 39, together with averages for Canada in the years 1919 to 1923.

38.—Average Prices per lb. paid by farmers for Grade No. 1 Clover and Grass Seed, by provinces, during April and May, 1923, and Average Prices for Canada during April and May, 1919-23.

Provinces.	Red Clover.	Alsike.	Alfalfa.	Sweet Clover.	Western Rye.	Timothy.	Brome Grass.
	cts.	cts.	cts.	cts.	cts.	cts.	cts.
Prince Edward Island	33	25	–	19	–	13	–
Nova Scotia	31	23	43	19	–	14	–
New Brunswick	30	22	28	21	–	14	–
Quebec	30	23	30	13	–	14	–
Ontario	26	18	28	10	–	11	–
Manitoba	35	28	42	15	12½	15	13
Saskatchewan	45	43	65	16	13½	18½	14¼
Alberta	48	38	41	20	14	18	16½
British Columbia	36	28⅓	59	22⅛	14½	16½	16⅝
Canada, 1923	29	21	34	13	13	13¼	14
" 1922	32¼	26¾	38⅜	15⅝	17⅞	14	19¼
" 1921	40½	41½	51⅓	20⅓	21½	16⅓	20
" 1920	74½	69	65	45	38	23⅓	43
" 1919	53⅓	44	43½	40	32	18½	37½

39.—Average Prices per lb. paid to farmers for Clover and Grass Seed, by provinces, during April and May, 1923, and Average Prices for Canada during April and May, 1919-23.

Provinces.	Red Clover.	Alsike.	Alfalfa.	Sweet Clover.	Western Rye.	Timothy.	Brome Grass.
	cts.	cts.	cts.	cts.	cts.	cts.	cts.
Prince Edward Island	28	19	–	12	–	10	–
Nova Scotia	–	–	–	–	–	–	–
New Brunswick	28	17	–	–	–	11½	–
Quebec	26	19	13	09	–	12	–
Ontario	18	12	21	07	–	08	–
Manitoba	–	–	–	08	09	09	08
Saskatchewan	–	–	–	08	08	15	09
Alberta	–	–	–	–	06	08	–
British Columbia	–	–	–	–	–	–	–
Canada, 1923	20	13	20½	07½	08	09	08¾
" 1922	21	16⅓	23⅓	11⅜	10½	09	09
" 1921	29	28	26⅓	11	11⅓	12½	14
" 1920	66	56	55	29	25	20⅓	29
" 1919	44	36	38	23½	27	16	30½

Index Numbers of Agricultural Prices.—Records of the average prices received by farmers for agricultural produce have been collected annually since 1909 through the crop correspondents of the Census and Statistics Office and Dominion Bureau of Statistics. From these records, annual index numbers have been calculated for each crop and for the field crops as a whole. The average prices for the five-year pre-war period 1909-1913 have in each case been taken as 100, and the figures for each year are expressed as a percentage of these. In calculating the index numbers for the combined field crops, the various crops have been weighted according to the proportion which the value of each crop in each year bears to the total value for that year. Table **40** and its accompanying diagram (p. 293) show the great increase which took place in agricultural prices during the war period and the fall which took place in 1920, 1921 and 1922. The years 1921 and 1922 are especially memorable for the great and sudden fall in the prices of agricultural produce, and the index numbers provide a convenient means of measuring its extent, and of making comparisons with previous years, and especially with the maximum prices, which were reached in 1919. For wheat the index number in 1922 was 123·2, a slight increase over 1921, when it was 117·4, a figure which represented a drop of 117·3 points, as compared with 1920 and of

226·1 points, as compared with 1919. Oats were also appreciably higher in 1922 than in 1921, 111·8 as against 100. These increases, however, were far more than offset by the decreases in the index numbers of the price of rye (from 101·4 to 81·7), of peas (from 196 to 179), of potatoes (from 167·3 to 117·4), of turnips, etc., (from 154·5 to 122·7), of alfalfa (from 172·1 to 110·2), and more especially by the cutting almost in half of the price of the great hay and clover crop, the index number of which declined from 202·2 in 1921—a high price due to the poorest crop on record—to 115·5. As a result the index number for agricultural prices as a whole fell from 147·5 in 1921 to 117 in 1922.

40.—Index Numbers of Agricultural Prices for Canada, 1914-1922.

Annual Average Prices, 1909-1913 = 100.

Field Crops.	Annual average prices 1909–13.[1]	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
	$	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Wheat	0.69	176·8	131·9	183·9	281·2	292·8	343·5	234·7	117·4	123·2
Oats	0.34	141·2	105·9	150·0	202·9	229·4	235·3	155·9	100·0	111·8
Barley	0.47	142·9	110·6	174·5	229·8	212·8	261·7	176·6	100·0	97·9
Rye	0.71	110·7	108·4	156·3	228·2	209·9	197·2	187·3	101·4	81·7
Peas	1.00	146·0	165·0	222·0	354·0	299·0	286·0	242·0	196·0	179·0
Beans	1.79	129·1	170·4	301·7	416·2	302·2	250·3	216·8	162·0	159·2
Buckwheat	0.61	118·0	123·0	175·4	239·3	259·0	245·9	209·8	145·9	137·7
Mixed grains	0.57	115·7	100·0	154·4	203·5	200·0	238·5	157·9	108·7	105·3
Flax	1.12	92·0	134·8	182·1	236·6	279·5	368·8	173·2	128·5	137·7
Corn for husking	0·63	112·7	112·7	169·8	292·1	277·8	206·3	184·1	131·7	131·7
Potatoes	0.46	106·5	130·4	176·1	219·6	213·1	206·5	210·8	167·3	117·4
Turnips, etc	0.22	122.7	109·1	177·3	209·1	195·1	227·3	186·4	154·5	122·7
Hay and clover	11.65	122·1	123·3	99·6	88·7	139·5	177·9	224·0	202·2	115·5
Fodder corn	4.95	99·2	99·2	99·4	103·8	124·2	139·8	156·6	142·4	100·4
Sugar beets	5.84	102·6	94·2	106·2	115·6	175·5	186·0	219·1	111·3	134·9
Alfalfa	11.59	122·3	109·4	92·2	100·0	153·9	188·5	205·3	172·1	110·2
All Field Crops	–	143·0	122·6	159·7	226·0	227·6	252·7	204·9	147·5	117·0

[1]Prices quoted for 1909-13 are per bushel, except for the last four items, where they are per ton.

8.—Miscellaneous Agricultural Statistics.

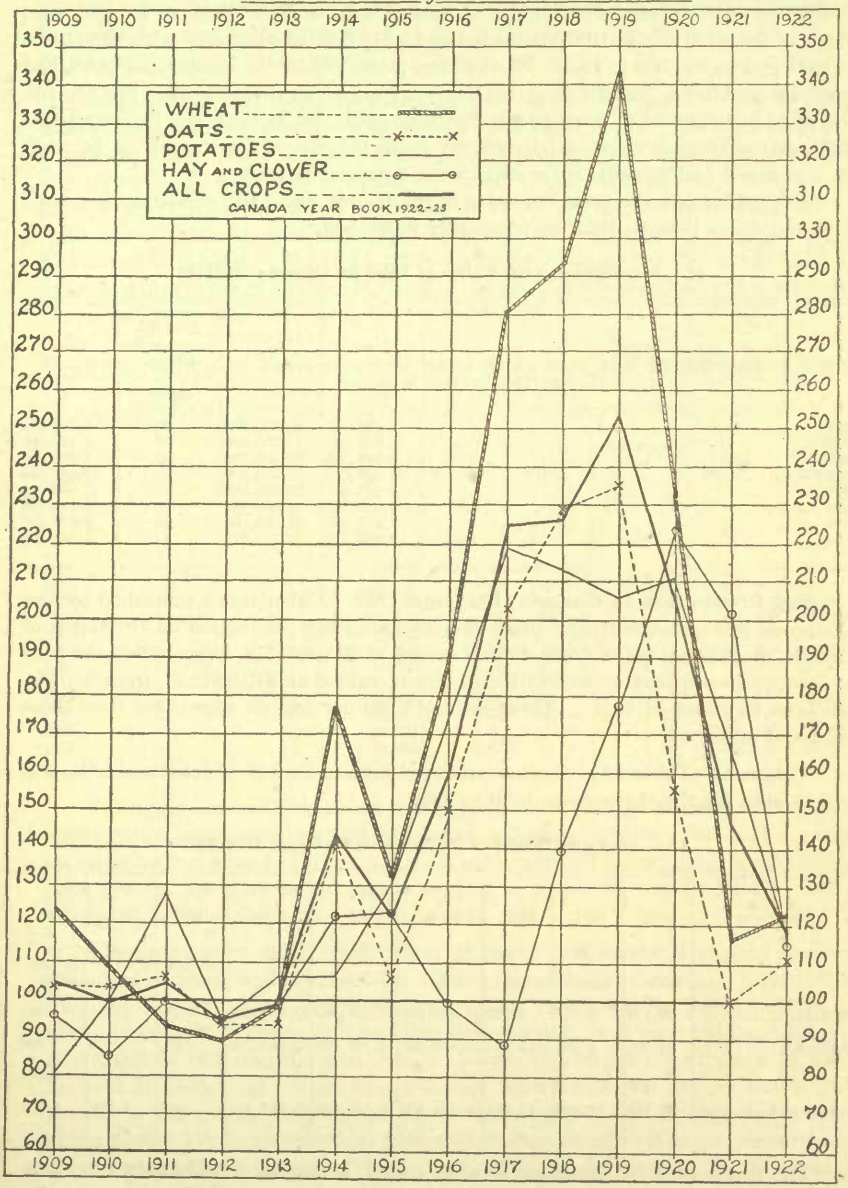
Production and Value of Wool.—According to estimates published by the Dominion Bureau of Statistics, the estimated production of wool in 1922 was, by provinces, as in Table 41.

41.—Estimated Production of Wool by Provinces, 1922.

Provinces.	Sheep.	Sheep's wool.	Lambs.	Lambs' wool.	Total sheep and lambs.	Total wool.
	No.	lb.	No.	lb.	No.	lb.
P. E. Island	59,244	414,708	46,459	185,836	105,703	600,544
Nova Scotia	185,987	1,301,909	143,358	573,432	329,345	1,875,341
New Brunswick	127,886	895,202	108,145	432,580	236,031	1,327,782
Quebec	567,095	3,969,665	423,823	1,695,292	990,918	5,664,957
Ontario	501,319	3,509,233	485,298	1,941,192	986,617	5,450.425
Manitoba	60,984	426,888	50,980	203,920	111,964	630.808
Saskatchewan	127,598	893,186	64,339	257,356	191,937	1,150,542
Alberta	166,012	1,162,084	94,354	377,416	260,366	1,539,500
British Columbia	28,171	197,197	21,574	86,296	49,745	283,493
Total	**1,824,296**	**12,770,072**	**1,438,330**	**5,753,320**	**3,262,626**	**18,523,392**

INDEX NUMBERS OF AVERAGE PRICES OF FIELD CROPS, 1909-22

Aannual Average Prices 1909-1913=100



The total wool clip of Canada for 1922 was, therefore, estimated at about 18,523,000 lb., as compared with 21,251,000 lb. in 1921 and 24,000,000 lb. in 1920, the estimate for 1920 being subject to correction by the census returns when available. At an average value for unwashed wool of 17·5 cents per lb., the total value of the wool clip of 1922 amounted to $3,244,000, as compared with $2,975,000 in 1921 and $5,280,000 in 1920. The average prices per lb. for washed and unwashed wool, by provinces, for the years 1915 to 1921 are given in Table **10.** For Canada the price in 1922 was 17 cents per lb. for unwashed, and 24 cents per lb. for washed wool, representing a substantial recovery from the record low figures of 14 cents for unwashed and 22 cents for washed wool, attained in 1921.

Table **42** shows the total estimates of production and value for 1922, compared with the years 1915 to 1921, as previously published.

42.—Production and Value of Wool in Canada, 1915-22.

Year.	Sheep.	Production of Wool.	Average price per lb. of Wool.	Value.
	No.	lbs.	cents.	$
1915	2,038,662	12,000,000	28	3,360,000
1916	2,022,941	12,000,000	37	4,440,000
1917	2,369,358	12,000,000	59	7,000,000
1918	3,052,748	20,000,000	60	12,000,000
1919	3,421,958	20,000,000	60	12,000,000
1920	3,720,783	24,000,000	22	5,280,000
1921	3,675,860	21,251,000	14	2,975,000
1922	3,262,626	18,523,392	17·5	3,244,000

Egg Production in Canada, 1921 and 1922.—Calculations published by the Dominion Bureau of Statistics place the estimated egg production on the farms of Canada in 1922 at 194,058,468 dozen, valued at $48,490,578, from 29,945,484 hens on farms, as compared with 168,049,154 dozen, valued at $40,968,841, from 25,755,356 hens on farms in 1921. These estimates do not include eggs other than those produced on farms.

Tobacco.—Table **43** gives the estimated area and yield of tobacco in Ontario and Quebec for the three years 1920 to 1922.

43.—Area and Yield of Tobacco in Canada, 1920-22.

Provinces.	1920.	1921.	1922.	1920.	1921.	1922.	1920.	1921.	1922.
	acres.	acres.	acres.	lb.	lb.	lb.	lb. per acre.	lb. per acre.	lb. per acre.
Ontario	20,114	6,553	9,189	21,688,500	7,121,962	11,031,870	1,078	1,091	1,201
Quebec	33,000	5,256	16,573	26,400,000	6,127,000	14,915,700	800	1,166	900
Totals and averages	53,114	11,809	25,762	48,088,500	13,248,962	25,947,570	905	1,124	1,007

The prices paid for Canadian tobacco varied, of course, considerably according to type and quality. Assuming for Ontario tobacco an average of 25 cents per lb. and for Quebec tobacco an average of 12 cents per lb., the total value of the Canadian tobacco crop of 1922 may be placed at $4,547,851, as compared with $2,393,190

1921 and $5,893,275 in 1920. For Ontario the estimated value is $2,757,967 in 1922 (11,031,870 lb. at 25 cents per lb.), as compared with $1,780,490 in 1921 (7,121,962 lb. at 25 cents per lb.) and $3,253,275 in 1920 (21,688,500 lb. at 15 cents per lb.). For Quebec the value in 1922 is $1,789,884 (14,915,700 lb. at 12 cents per lb.), as compared with $612,700 in 1921 (6,127,000 lb. at 10 cents per lb.), and $2,640,000 in 1920 (26,400,000 lb. at 10 cents per lb.).

Sugar Beets and Beetroot Sugar.—There are three sugar factories in Canada which manufacture sugar from Canadian grown sugar beets. They are situated at Chatham, Wallaceburg and Kitchener, in the province of Ontario, and are under the control of the Dominion Sugar Company, Ltd., of Chatham; only the first two of these factories were in operation in 1922. From 1903 until 1914, when it went out of business, there was also in operation the Knight Sugar Company of Raymond in Alberta. Table **44** gives particulars respecting the area, yield and value of sugar beets as a farm crop and of the production of refined sugar made from Canadian grown sugar beets for the years 1911-22.

44.—Area, Yield and Value of Sugar Beets in Canada and Production of Refined Beetroot Sugar, 1911-1922.

Year.	Acres grown.	Yield per acre.	Total yield.	Average price per ton.	Total value.	Production of refined beetroot sugar.
	acres.	tons.	tons.	$ cts.	$	lb.
1911	20,677	8·50	175,000	6·59	1,154,000	21,329,689
1912	18,900	10·50	201,600	5·00	1,005,000	26,767,287
1913	17,000	8·75	148,000	6·12	906,000	26,149,216
1914	12,100	9·00	108,600	6·00	651,000	31,314,763
1915	18,000	7·75	141,000	5·50	775,500	39,515,802
1916	15,000	4·75	71,000	6·20	440,000	17,024,377
1917	14,000	8.40	117,600	6·75	793.800	23,376,850
1918	18,000	11·25	204,000	12·71	2,593,715	50,092,835
1919	18,800	9·50	180,000	14·61	2,630,027	37,839,271
1920	34,491	9·94	343,000	15·47	5.307,243	89,280,719
1921	25,535	7·80	199.334	9·90	1,974,384	52,862,377
1922	14,955	8·55	127,807	7·56	966,521	29,911,770

The total value of the beetroot sugar produced in 1922 is estimated at $1,645,885, representing an average wholesale price of 5·5 cents per lb. For 1921 the corresponding values were $3,554,203 for total value and 6·7 cents, the average wholesale price per lb. In 1920 the average wholesale price per lb. was 14·4 cents, and the estimated value of the crop was $12,856,424.

Maple Sugar.—The maple sugar industry of Canada is carried on in the provinces of Quebec, Ontario, New Brunswick and Nova Scotia. From 1851 to 1861 the average yearly production was about 13,500,000 lb., from 1861 to 1871 about 17,500,000 lb., from 1871 to 1881, 19,000,000 lb., and from 1881 to 1891 about 22,000,000 lb. During the next decade the yearly average fell to about 21,200,000 lb., and in more recent years to a little less than 20,000,000 lb. In the Maritime Provinces the yearly output has rarely exceeded 500,000 lb. Quebec produces about 14,300,000 lb. and Ontario 5,000,000 lb. per annum. It is estimated that the industry, which represents an average annual value of almost $2,000,000, is carried on by about 50,000 growers. Table **45** shows the production and value of maple products in the province of Quebec, according to the annual statistics of the Dominion and Quebec Bureaus of Statistics, as follows:

45.—Maple Products in the Province of Quebec, 1918-22.

Year.	Maple Sugar.			Maple Syrup.			Total value of sugar and syrup.
	Quantity.	Average price per lb.	Value.	Quantity.	Average price per gallon.	Value.	
	lb.	$	$	gallons.	$	$	$
1918	10,173,622	0·15	1,526,043	1,928,201	1·50	2,892,301	4,418,344
1919	12,353,667	0·25	3,088,417	1,470,275	2·25	3,675,687	6,396,435
1920	15,615,141	0·20	3,123,028	1,449,649	2·50	3,624,123	6,747,151
1921	12,285,514	0·15	1,842,827	1,375,635	1·80	2,476,143	4,318,970
1922	9,016,650	0·15	1,353,497	1,575,074	1·80	2,835,133	4,187,630

Stocks of Grain in Canada.—Table 46 shows the quantities of grain in farmers' hands at the close of the Canadian crop year on August 31, 1922, with comparative figures for the two previous years, as compiled from the estimates of crop correspondents. Adding the stocks in the elevators and flour mills, Table 47 shows the total quantities of grain in store at the close of each of the crop years, 1920, 1921 and 1922.

46.—Stocks of Grain in Farmers' Hands at the end of the crop years 1920-22.

Field Crops.	Total production in 1919.	In farmers' hands, Aug. 31, 1920.		Total production in 1920.	In farmers' hands, Aug. 31, 1921.		Total production in 1921.	In farmers' hands, Aug. 31, 1922.	
	000 bush.	p.c.	bush.	000 bush.	p.c.	bush.	000 bush.	p.c.	bush.
Wheat	193,260	1·10	2,122,300	263,189	0·81	2,144,400	306,858	0·78	2,360,300
Barley	56,389	1·39	781,100	63,311	1·69	1,072,900	59,709	1·09	645,200
Oats	394,387	2·16	8,515,260	530,710	5·59	29,657,300	426,233	2·72	11,613,000
Rye	10,207	0·62	62,900	11,306	0·52	58,500	21,455	0·37	78,500
Flaxseed	5,473	1·45	79,200	7,998	0·63	50,700	4,112	0·15	6,300

47.—Stocks of Grain in Canada at the close of the Crop Years 1920, 1921 and 1922.

Quantities in	Wheat.			Barley.		
	Aug. 31, 1920.	Aug. 31, 1921.	Aug. 31, 1922.	Aug. 31, 1920.	Aug. 31, 1921.	Aug. 31, 1922.
	bush.	bush.	bush.	bush.	bush.	bush.
Farmers' hands	2,122,300	2,144,400	2,360,300	781,100	1,072,900	645,200
Country Elevators in West	980,000	1,566,689	4,657,202	210,000	792,955	768,951
Terminal Elevators	1,603,811	2,367,181	4,683,435	171,703	827,962	403,977
Public Elevators	4,316,527	874,045	1,683,700	337,301	491,884	92,339
Eastern Elevators	30,007	23,260	–	326	7,718	–
Flour Mills	237,780	719,624	1,500,000	2,000	27,287	29,462
Transit by rail	–	6,031,889	4,578,027	–	628,733	253,499
Totals	**9,290,425**	**13,727,088**	**19,462,664**	**1,502,430**	**3,849,439**	**2,193,428**

Quantities in	Oats.			Rye.		
	bush.	bush.	bush.	bush.	bush.	bush.
Farmers' Hands	8,515,200	29,657,300	11,613,000	62,900	58,500	78,500
Country Elevators in West	560,000	3,195,676	1,461,009	–	15,025	753,030
Terminal Elevators	339,829	4,668,256	872,179	58,209	393,106	788,779
Public Elevators	240,100	4,724,616	1,089,189	–	23,379	8,160
Eastern Elevators	10,942	27,562	–	308	5,920	–
Flour mills	14,846	350,938	370,481	355	5,698	2,513
Transit by rail	–	1,336,001	334,471	–	328,922	975,593
Totals	**9,680,917**	**43,960,349**	**15,740,329**	**121,772**	**830,550**	**2,606,575**

47.—Stocks of Grain in Canada at the close of the Crop Years 1920, 1921 and 1922—concluded.

Quantities in	Flaxseed.		
	Aug. 31, 1920.	Aug. 31, 1921.	Aug. 31, 1922.
	bush.	bush.	bush.
Farmers' Hands	79,200	50,700	6,300
Country Elevators in West	48,000	195,402	89,620
Terminal Elevators	466,086	1,465,369	190,924
Public Elevators	21,629	53,049	14,484
Eastern Elevators	1,208	20	–
Transit by rail	–	39,458	9,354
Totals	**616,123**	**1,803,998**	**310,682**

According to Table 47, therefore, on August 31, 1922, about 19,463,000 bushels of wheat, 2,193,000 bushels of barley, 15,740,000 bushels of oats, 2,607,000 bushels of rye and 311,000 bushels of flaxseed constituted the "carry over" into the new crop year running from September 1, 1922, to August 31, 1923.

Table 48 gives the results of inquiries as to the quantities of wheat, and wheat flour expressed as wheat, in Canada on March 31, 1923, with the corresponding figures for 1919 to 1922.

48.—Stocks of Wheat in Canada, March 31, 1919-23.

Wheat in	March 31, 1919.	March 31, 1920.	March 31, 1921.	March 31, 1922.	March 31, 1923.
	bush.	bush.	bush.	bush.	bush.
Elevators	69,983,064	30,622,398	35,802,362	58,338,581	69,620,269
Flour mills	5,390,066	5,575,253	3,635,818	4,000,000	7,000,000
Transit by rail	10,854,840	6,271,697	7,119,983	10,998,505	8,396,782
Farmers' hands	32,315,000	34,837,000	48,919,000	41,649,000	54,771,000
Totals	**118,542,970**	**77,306,348**	**95,477,163**	**114,986,086**	**139,788,051**

Table 49 gives for oats, barley and flaxseed the stocks in Canada on March 31, 1923, as compared with the corresponding date of the previous year.

49.—Stocks in Canada of Oats, Barley and Flaxseed, March 31, 1922 and 1923.

Grain in	Oats.		Barley.		Flaxseed.	
	March 31, 1922.	March 31, 1923.	March 31, 1922.	March 31, 1923.	March 31, 1922.	March 31, 1923.
	bush.	bush.	bush.	bush.	bush.	bush.
Elevators	21,852,211	16,899,256	5,536,623	7,269,234	1,390,583	808,150
Flour mills	150,000	900,000	14,000	70,000	–	–
Transit by rail	6,003,399	2,755,299	1,102,649	254,096	179,711	96,829
Farmers' hands	147,604,000	171,163,000	14,901,000	17,836,000	618,000	837,000
Totals	**175,609,610**	**191,717,555**	**21,554,272**	**25,429,330**	**2,188,294**	**1,741,979**

Distribution of the Canadian Wheat and Oat Crops.—Table 50 shows the distribution of the wheat crops of 1921 and 1922.

As regards the commercial movement of the crop, Table 50 is constructed in general conformity with the data published by the Internal Trade Branch of the Dominion Bureau of Statistics. It will be noted that for the year ended August 31, 1922, the whole of the estimated gross production of 300,858,000 bushels of wheat is accounted for with the exception of a plus balance of 1,645,000 bushels, rather more than 0·5 p.c. of the total. For 1923, however, 24,038,000 bushels are unaccounted for, a balance equal to 6 p.c. of the total.

50.—Distribution of the Canadian Wheat Crops of 1921 and 1922.

Items.	Crop year ended Aug. 31, 1922.	Crop year ended Aug. 31, 1923.	Items.	Crop year ended Aug. 31, 1922.	Crop year ended Aug. 31, 1923.
	000 bush.	000 bush.		000 bush.	000 bush.
Carry over Sept. 1, 1921-22	7,856	16,013[1]	Exports as grain	158,550	229,682
Gross production	300,858	399,786	Exports as flour[1]	35,454	49,811
Loss in cleaning	9,026	11,994	Total exports	194,004	279,493
Grain not merchantable	12,034	9,799	Retained for seed	39,240	40,000
Net production	279,798	377,992	Milled for food	37,000	41,000
Imports	248	417	Carried over, August 31, 1922-23	16,013[2]	9,992
Available for distribution	287,902	394,256	Unaccounted for	+1,645	+24,038

Table **51** presents similar data in respect of oats. The bulk of this crop is consumed as food for live stock, and the table shows approximately how the remaining portion of the crop is disposed of, including the quantities exported as grain, oatmeal and rolled oats, the quantity retained for seed and the quantity milled for home consumption representing chiefly oatmeal and rolled oats used for human food. The carry over represents grain in the elevators, in farmers' hands, in transit, etc., and the balance is the quantity consumed in Canada for feeding to live stock, the amount being estimated at 375,384,000 bushels in 1923 and 319,880,000 bushels in 1922.[3]

51.—Distribution of the Canadian Oat Crops of 1921 and 1922.

Items.	Crop year ended Aug. 31, 1922.	Crop year ended Aug. 31, 1923.	Items.	Crop year ended Aug. 31, 1922.	Crop year ended Aug. 31, 1923.
	000 bush.	000 bush.		000 bush.	000 bush.
Carry over, Sept. 1, 1921-22	42,773	15,274	Exports as grain	27,038	23,561
Gross production	426,233	491,239	Exports as meal, etc.	2,854	2,344
Grain not merchantable	58,362	38,670	Total exports	29,892	25,905
Net production	367,871	452,569	Retained for seed	39,044[4]	39,000
Imports	677	414	Milled for home consumption	7,231	6,989
Available for distribution	411,321	468,287	Carry over, August 31, 1922-23	15,274	20,979
			Balance for home consumption as grain	319,880	375,384

Per Capita Consumption of Wheat in Canada.—It is calculated that for the period of ten years ended August 31, 1919, the average per capita consumption of wheat in Canada was 5·8 bushels, that during the four years of war (1915-18) the rate was 4·2 bushels and that during the five-year pre-war period from 1910 to 1914 it was 7·7 bushels. These rates represent the gross per capita consumption, after accounting for the whole of the production in the way of losses due to cleaning and unmerchantable grain, adding the imports and deducting exports and grain retained for seed. During recent years the Dominion Bureau of Statistics has perfected arrangements for the periodical collection of statistics of wheat milled in Canada. These indicate on the basis of three years' returns that the per capita

[1] Flour is expressed as wheat on the basis of 1 barrel of flour, weighing 196 lb., being equal to 4½ bushels of wheat.

[2] The carry over, given as 19,463,000 bushels on p. 348 of the Monthly Bulletin of September, 1922, was subsequently reduced to 16,013,000 bushels on the ground that the difference represented new wheat of the crop of 1923 included amongst the quantity reported as in transit on August 31, 1922.

[3] For similar calculations extending over a series of years both for wheat and oats, see the Year Book of 1920, pp. 263-266 and the Monthly Bulletin of Agricultural Statistics for April, 1920 (Vol. 13, No. 140), p. 75, and April, 1922 (Vol. 15, No. 164), p. 127.

[4] Including 2,691,000 bushels as seed for 1,076,300 acres in Alberta, estimated as sown, but not reaped for grain.

consumption of wheat is 5·4 bushels, a figure only 0·4 bushels below that of 5·8 bushels, the average given above for the ten-year period ended August 31, 1919. A report on the Flour Milling Industry of Canada for 1921, issued in March, 1923, by the Industrial Census Division of the Bureau placed the per capita consumption of wheat flour in Canada for the calendar year 1921 at 0·92 barrels, representing, at 4·5 bushels to the barrel, 4·3 bushels. According to the quantity shown in Table **50** as milled in the crop year ended August 31, 1923, viz., 41,000,000 bushels, the per capita consumption is 4·6 bushels, an excess difference of only 0·3 bushels. The rate shown by the Industrial Census Branch applies, however, only to a single year. The rate for the ten years 1910 to 1919 represents moreover calculations that are gross rather than net. Altogether the conclusion appears to be justified that the average per capita consumption of wheat in Canada is close to 5 bushels, either slightly more or slightly less.

9.—Summary Statistics of Agricultural Revenue and Wealth.

Agricultural Revenue and Wealth of Canada.—Table **52** shows under principal headings the gross agricultural revenue of Canada, by provinces, for each of the five years 1918 to 1922. It is important to observe that the figures represent gross values, because it is not possible to distinguish between crops used as materials for other kinds of production, such as the feeding of live stock, nor to allow for the costs of production.[1]

52.—Estimated Gross Annual Agricultural Revenue of Canada, by Provinces, 1918-22.

("000" omitted.)

Items.	1918.	1919.	1920.	1921.	1922.
	$	$	$	$	$
Canada—					
Field crops	1,372,936	1,537,169	1,455,244	931,865	962,293
Farm animals	194,498	186,679	143,935	98,424	77,548
Wool	12,416	11,000	5,280	2,975	3,180
Dairy products	200,341	251,527	260,337	250,000	250,618
Fruits and vegetables	48,671	53,230	60,719	59,428	55,855
Poultry and eggs	40,000	40,000	45,000	51,363	58,815
Fur farming	1,048	1,048	1,140	1,487	1,504
Maple products	5,258	7,494	8,100	5,751	5,576
Tobacco	4,270	15,620	5,893	2,393	4,548
Flax fibre	2,286	5,524	434	–	–
Totals	**1,881,718**	**2,109,291**	**1,986,082**	**1,403,686**	**1,419,937**
Prince Edward Island—					
Field crops	16,278	22,367	18,530	14,203	10,890
Farm animals	1,772	2,315	1,763	1,059	1,174
Wool	312	313	160	98	42
Dairy products	1,600	2,231	2,278	1,796	1,800
Fruits and vegetables	300	300	300	300	300
Poultry and eggs	720	720	810	792	985
Fur farming	833	833	767	952	955
Totals	**21,815**	**29,079**	**24,608**	**19,200**	**16,146**
Nova Scotia—					
Field crops	42,486	63,357	47,847	29,557	24,140
Farm animals	4,654	5,074	4,122	2,235	2,089
Wool	1,207	955	544	278	338
Dairy products	2,632	3,719	4,455	4,316	4,400
Fruits and vegetables	10,000	10,000	12,451	15,000	13,500
Poultry and eggs	800	800	900	865	1,063
Fur farming	54	54	49	66	68
Maple products	40	45	45	29	28
Totals	**61,873**	**84,004**	**70,413**	**52,346**	**45,626**

[1] For explanation of the methods used in estimating values, see the original article in the Monthly Bulletin of Agricultural Statistics for March, 1922 (Vol. 15, No. 163), pp. 85-89.

52.—Estimated Gross Annual Agricultural Revenue of Canada, by Provinces, 1918-22—concluded.

Items.	1918.	1919.	1920.	1921.	1922.
	$	$	$	$	$
New Brunswick—					
Field crops	42,891	53,134	46,357	38,326	31,979
Farm animals	3,681	4,869	3,934	2,315	2,433
Wool	653	707	378	176	252
Dairy products	1,419	2,214	2,109	1,901	2,000
Fruits and vegetables	1,200	1,207	1,073	1,077	1,000
Poultry and eggs	960	960	1,080	885	1,496
Fur farming	55	55	127	149	150
Maple products	50	53	53	63	60
Totals	**50,909**	**63,199**	**55,111**	**44,892**	**39,370**
Quebec—					
Field crops	276,777	309,963	330,251	219,154	165,160
Farm animals	40,862	37,683	31,250	20,962	18,325
Wool	3,956	3,351	1,979	1,203	1,185
Dairy products	58,004	68,432	67,115	66,056	64,118
Fruits and vegetables	8,000	7,820	7,865	7,272	7,555
Poultry and eggs	5,040	5,040	5,670	5,467	9,327
Fur farming	49	49	40	116	116
Maple products	4,418	6,396	6,747	4,319	4,188
Tobacco	2,320	6,780	2,640	613	1,790
Totals	**399,426**	**445,514**	**453,587**	**324,462**	**271,764**
Ontario—					
Field crops	384,014	383,574	375,747	239,627	222,599
Farm animals	68,916	70,288	59,953	36,051	35,468
Wool	3,880	3,477	1,354	613	818
Dairy products	102,216	130,041	135,093	130,041	132,000
Fruits and vegetables	16,620	16,658	22,823	16,581	16,200
Poultry and eggs	14,400	14,400	16,200	19,966	24,108
Fur farming	11	11	52	65	70
Maple products	750	1,000	1,255	1,340	1,300
Tobacco	1,950	8,840	3,253	1,780	2,758
Flax fibre	2,286	5,524	434	–	–
Totals	**595,043**	**633,813**	**616,164**	**446,064**	**435,321**
Manitoba—					
Field crops	180,508	182,097	133,990	72,136	98,078
Farm animals	13,781	12,990	9,342	5,738	2,728
Wool	504	529	171	71	82
Dairy products	11,420	13,092	13,830	13,418	13,500
Fruits and vegetables	1,900	1,900	1,900	1,900	1,900
Poultry and eggs	3,640	3,640	4,095	4,101	3,784
Fur farming	–	–	–	81	85
Totals	**211,753**	**214,248**	**163,328**	**97,445**	**120,157**
Saskatchewan—					
Field crops	299,362	340,030	271,213	215,635	296,227
Farm animals	24,033	22,946	15,076	12,229	6,532
Wool	493	439	196	135	184
Dairy products	6,051	9,346	9,868	9,202	9,300
Fruits and vegetables	1,400	1,400	1,400	1,400	1,400
Poultry and eggs	7,840	7,840	8,820	10,352	8,786
Fur farming	–	–	78[1]	27	28
Totals	**339,179**	**382,001**	**306,651**	**248,980**	**322,457**
Alberta—					
Field crops	113,072	158,044	204,292	82,780	94,947
Farm animals	33,164	26,353	16,054	16,065	8,133
Wool	1,243	1,102	445	377	231
Dairy products	10,387	14,620	15,678	14,440	14,600
Fruits and vegetables	1,500	1,500	1,500	1,500	1,500
Poultry and eggs	4,480	4,480	5,040	5,314	6,154
Fur farming	26[2]	26[2]	12	16	17
Totals	**163,872**	**206,125**	**243,021**	**120,492**	**125,582**
British Columbia—					
Field crops	17,548	24,603	27,017	20,447	18,273
Farm animals	3,635	4,161	2,441	2,470	666
Wool	162	127	53	24	48
Dairy products	6,612	7,832	9,881	8,830	8,900
Fruits and vegetables	7,751	12,445	11,407	14,398	12,500
Poultry and eggs	2,120	2,120	2,385	3,621	3,112
Fur farming	20	20	15	15[3]	15
Totals	**37,848**	**51,308**	**53,199**	**49,805**	**43,514**

[1] Including Manitoba. [2] Including Manitoba and Saskatchewan. [3] Including the Yukon Territory.

The table shows that for 1922 the total agricultural revenue of Canada was $1,419,937,000, as compared with $1,403,686,000 in 1921, $1,986,082,000 in 1920, $2,109,291,000 in 1919 and $1,881,718,000 in 1918. The total for 1922, viz., $1,419,937,000, shows a net increase, as compared with 1921, of $16,251,000, or 1·2 p.c., and, as compared with 1920, a decrease of $566,145,000, or 28·5 p.c. It will be seen from the table that whilst for field crops there is in 1922 an increase of $30,428,000, this is largely offset by the further decline in live stock values, the production for the year 1922 being only $77,548,000, as against $98,424,000 in 1921 and $143,935,000 in 1920.

Comparing the provinces for the year 1922, Ontario leads with a total value of $435,321,000; next comes Saskatchewan with $322,457,000; and then follow in the order given: Quebec $271,764,000; Alberta $125,582,000; Manitoba $120,157,000; Nova Scotia $45,626,000; British Columbia $43,514,000; New Brunswick $39,370,000; and Prince Edward Island $16,146,000.

Table 53 gives the results of calculations showing, approximately, by provinces, for 1922, the total agricultural wealth of the Dominion. To arrive at this total, an estimate of the value in 1922 of land, buildings, and farm implements is added to the value of the agricultural production for the year and to the capital value of farm live stock and of poultry.

53.—Estimated Gross Agricultural Wealth of Canada, by Provinces, 1922.

("000" omitted.)

Description.	Prince Edward Island.	Nova Scotia.	New Brunswick.	Quebec.	Ontario.
	$	$	$	$	$
Lands	23,300	62,528	39,587	508,758	734,108
Buildings	14,031	51,931	37,772	257,094	377,253
Implements	4,475	5,723	7,634	64,943	97,168
Live stock	9,373	19,598	20,326	123,087	218,755
Poultry	813	844	1,486	7,333	15,508
Animals on fur farms	4,000	400	675	450	400
Agricultural production	16,146	45,626	39,370	271,764	435,321
Totals	**72,138**	**186,650**	**146,850**	**1,233,429**	**1,878,513**

Description.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.	Canada.
	$	$	$	$	$
Lands	355,468	863,961	439,460	169,706	3,196,876
Buildings	74,440	121,703	66,113	35,375	1,035,712
Implements	44,887	111,170	51,224	4,436	391,660
Live stock	58,599	130,011	86,431	15,707	681,887
Poultry	2,945	6,250	3,981	2,035	41,195
Animals on fur farms	450	100	80	120[1]	6,675
Agricultural production	120,157	322,457	125,582	43,514	1,419,937
Totals	**656,946**	**1,555,652**	**772,871**	**270,893**	**6,773,942**

[1] Including Yukon Territory $70,000.

The gross agricultural wealth of Canada for 1922 is therefore estimated at $6,773,942,000, as compared with $6,837,737,100 in 1921. The net decrease of $63,795,100 is due chiefly to the fall in the value of farm live stock, amounting to $84,077,000, against which there are increases for agricultural production, $16,251,000, and other items, $4,030,900.

10.—Statistics of the World's Agriculture.

World's Production of Cereals and Potatoes.—Table 54, constructed from data published by the International Institute of Agriculture, either in the International Year Book of Agricultural Statistics, 1909 to 1921, or in the monthly International Crop Report and Agricultural Statistics, shows the area and yield of wheat, rye, barley, oats, corn and potatoes in various countries of the world for the years 1921 and 1922 in countries of the northern hemisphere, and for years 1921-22 and 1922-23 in countries of the southern hemisphere (Argentina, Chile, Uruguay, South Africa, Australia and New Zealand). The table includes also, for purposes of comparison, the annual average areas and yields for the five years 1916-20 (1916-17 to 1920-21 for the southern hemisphere) and the areas and yields of 1922 (1922-23) in the form of percentages of 1921 (1921-22) and of the five-year averages.

Wheat.—For 38 countries the production of wheat in 1922 was 3,088,583,000 bushels from 211,947,000 acres, as compared with 3,078,355,000 bushels from 211,926,000 acres in 1921, and 2,747,394,000 bushels from 201,931,000 acres, the five-year average for the years 1916 to 1920. The area under wheat in 1922 was practically the same as in 1921 and was 5 p.c. above the five-year average, and the 1922 yield was 100·3 p.c. of the 1921 yield, and 112·4 p.c. of the five-year average. The average yield per acre was 14·6 bushels, as against 14·5 bushels in 1921, and 13·6 bushels, the five-year average.

Rye.—In 24 countries the production of rye was in 1922, 800,061,000 bushels from 44,402,000 acres, as against 819,413,000 bushels from 40,694,000 acres for 1921, and 592,073,000 bushels from 38,008,000 acres, the average acreage and yield of the five-year period 1916 to 1920. The area under rye in 1922 was 109·1 p.c. of the 1921 area, and 116·8 p.c. of the five-year average. The yield was 97·6 p.c. of the 1921 yield and 135·1 p.c. of the five-year average.

Barley.—In 32 countries the total production of barley in 1922 was 998,434,000 bushels from 44,111,000 acres, as against 968,826,000 bushels from 44,171,000 acres in 1921, and 960,556,000 bushels from 43,492,000 acres, the five-year average for the years 1916 to 1920. The acreage under barley was 99·9 p.c. of that in 1921, and 101·4 p.c. of the five-year average; the yield was 103·1 p.c. of the yield in 1921 and 103·9 p.c. of the five-year average.

Oats.—In 31 countries the total production of oats in 1922 was 3,078,894,000 bushels from 102,468,000 acres, as compared with 2,858,248,000 bushels from 107,957,000 acres in 1921, and 3,147,574,000 bushels from 100,748,000 acres, the five-year average for the period 1916 to 1920. The acreage under oats in 1922 was 94·9 p.c. of 1921, and 101·7 p.c. of the five-year average; the yield was 107·7 p.c. of 1921, and 97·8 p.c. of the five-year average.

Corn.—Nineteen countries produced 3,508,279,000 bushels from 137,728,000 acres in 1922, as compared with 3,715,476,000 bushels from 138,319,000 acres in 1921, and 3,583,059,000 bushels from 141,750,000 acres, the five-year average for 1916 to 1920. The acreage in 1922 was 99·6 p.c. of that of 1921, and 97·2 p.c. of the five-year average; the yield was 94·4 p.c. of 1921, and 97·9 p.c. of the five-year average.

Potatoes.—The yield for 28 countries in 1922 was 3,134,681,000 centals from 28,960,000 acres, as against 2,087,435,000 centals from 27,845,000 acres in 1921, and 2,156,858,000 centals from 25,646,000 acres, the five-year average for 1916 to 1920. The acreage in 1922 was 104 p.c. of that in 1921, and 112·9 p.c. of the five-year average; the yield was 150·2 p.c. of 1921, and 145·3 p.c. of the five-year average.

54.—Acreage and Production of Cereals and of Potatoes in Various Countries of the World, 1921 and 1922.

Countries.	1921.	1922.	Average 1916–20.	Per cent of 1921.	Per cent of average.	1921.	1922.	Average 1916–20.	Per cent of 1921.	Per cent of average.
	000 acres.	000 acres.	000 acres.	p.c.	p.c.	000 bush.	000 bush.	000 bush.	p.c.	p.c.
Wheat—										
Germany	3,562	3,396	3,304	95·3	102·8	107,824	71,934	81,143	66·7	88·7
Austria	378	454	371	120·1	122·3	6,530	7,150	5,274	109·5	135·6
Belgium	344	300	294	87·4	102·3	14,495	10,615	7,452	73·2	142·4
Bulgaria	2,361	2,226	2,183	94·3	102·0	42,510	37,705	29,999	88·7	125·7
Denmark	220	237	146	108·0	162·3	11,145	9,370	5,997	84·1	156·2
Spain	10,386	10,309	10,270	99·3	100·4	145,152	125,471	139,715	86·4	89·8
Serb-Croat-Slovene State	3,699	3,723	3,560	100·6	104·6	51,810	42,249	43,012	81·5	98·2
Finland	20	22	18	111·2	120·3	280	296	254	105·8	116·8
France	13,300	12,702	12,110	95·5	104·9	323,472	243,244	212,013	75·2	114·7
England and Wales	1,976	1,967	2,097	99·5	93·8	69,776	61,312	62,680	87·9	97·8
Scotland	65	65	67	100·0	96·4	2,568	2,520	2,612	98·1	96·5
Ireland	43	41	96	95·1	42·8	1,448	1,416	3,389	97·8	41·8
Greece	988	890	1,234	90·0	72·1	11,170	9,553	11,001	85·5	86·8
Hungary	2,888	2,855	2,662	98·8	107·2	52,716	45,074	38,295	85·5	117·7
Italy	11,779	11,404	10,981	96·8	103·9	192,839	160,570	162,188	83·3	99·0
Latvia	46	70	39	153·5	–	784	959	389	122·4	–
Norway	41	25	32	61·0	78·5	972	643	781	66·2	82·4
Netherlands	180	156	145	86·6	108·0	8,425	5,236	5,006	62·1	104·6
Poland	2,093	2,574	1,791	–	–	37,410	42,452	22,741	–	–
Portugal	1,267	1,123	965	88·6	116·4	9,418	9,782	8,597	103·9	113·8
Rumania	6,149	6,548	4,998	106·5	131·0	78,564	92,008	61,310	117·1	150·1
Sweden	360	356	347	99·0	102·8	12,577	9,381	8,947	74·6	104·8
Switzerland	173	152	195	87·9	77·9	5,284	3,571	6,029	67·6	59·2
Czecho-Slovakia	1,556	1,527	1,566	98·1	97·5	38,682	33,621	26,362	86·9	127·5
Canada	23,261	22,423	16,968	96·4	132·1	300,858	399,786	228,410	132·9	175·0
United States	63,696	61,230	58,685	96·1	104·3	814,905	856,211	799,159	105·1	107·1
Cyprus	197	193	151	97·7	123·7	2,425	2,562	2,045	105·7	125·3
India	25,783	28,234	30,322	109·5	93·1	250,357	366,352	344,587	146·3	106·3
Japan	1,264	1,229	1,346	97·2	91·3	26,921	27,615	30,246	102·6	91·3
Algeria	2,816	3,103	3,134	110·2	99·0	33,764	18,233	25,730	54·0	70·9
Egypt	1,458	1,518	1,273	104·1	119·3	37,011	36,648	32,073	99·0	114·3
French Morocco	1,960	2,068	1,790	105·5	115·5	23,220	12,894	19,025	55·5	67·8
Tunis	1,500	882	1,452	58·8	60·7	10,623	3,674	7,395	34·6	49·7
Argentina	13,937	16,081	16,143	115·5	99·6	180,643	194,071	171,018	107·4	113·5
Chile	1,296	1,285	1,229	99·2	104·6	22,179	23,420	21,801	105·6	107·4
Uruguay	812	494	795	60·9	62·2	9,944	3,674	7,811	37·0	47·0
Australia	9,719	9,800	8,958	100·8	109·4	129,089	108,811	106,930	84·3	101·8
New Zealand	353	285	214	80·8	133·5	10,565	8,500	5,978	80·5	142·2
Totals	**211,926**	**211,947**	**201,931**	**100·0**	**105·0**	**3,078,355**	**3,088,583**	**2,747,394**	**100·3**	**112·4**

54.—Acreage and Production of Cereals and of Potatoes in Various Countries of the World, 1921 and 1922—continued.

Countries.	1921.	1922.	Average 1916-20.	Per cent of 1921.	Per cent of average.	1921.	1922.	Average 1916-20.	Per cent of 1921.	Per cent of average.
	000 acres.	000 acres.	000 acres.	p.c.	p.c.	000 bush.	000 bush.	000 bush.	p.c.	p.c.
Rye—										
Germany	10,541	10,237	10,735	97·1	95·4	267,684	206,052	217,211	77·0	94·9
Austria	758	831	715	109·6	116·1	13,161	12,990	9,567	98·7	135·8
Belgium	559	531	441	95·0	120·4	21,273	18,384	9,742	86·4	188·7
Bulgaria	489	442	464	90·4	95·4	8,390	7,453	6,056	88·8	123·1
Denmark	559	547	521	97·9	105·0	12,204	14,291	12,110	117·1	118·0
Spain	1,786	1,757	1,815	98·4	96·8	28,118	26,252	26,911	93·4	97·5
Serb-Croat-Slovene State	461	499	489	108·1	101·8	5,816	4,443	6,091	76·4	72·9
Finland	606	578	592	95·5	97·7	10,385	7,775	9,422	74·9	82·5
France	2,227	2,087	2,079	93·7	100·4	44,392	37,611	32,535	84·7	115·6
Greece	222	198	106	88·9	–	3,151	2,362	1,241	75·0	–
Hungary	1,341	1,340	1,475	99·9	90·9	23,148	21,443	20,564	92·6	104·3
Italy	287	282	278	98·1	101·3	5,634	4,764	4,829	84·6	98·6
Latvia	561	584	486	104·2	–	9,806	6,846	4,686	69·8	–
Norway	36	30	37	81·7	80·3	1,043	862	935	82·7	92·2
Netherlands	499	491	485	98·3	101·3	17,717	13,252	13,096	74·8	101·2
Poland	8,866	11,225	7,236	–	–	167,560	197,375	73,660	–	–
Portugal	573	665	696	116·0	95·6	4,564	5,294	4,115	116·0	128·7
Rumania	807	659	780	81·6	84·4	9,081	9,206	9,445	101·4	97·5
Sweden	913	872	903	95·5	96·6	27,812	22,678	20,039	81·5	113·2
Switzerland	49	55	55	111·5	100·5	1,559	1,693	1,664	108·6	101·7
Czecho-Slovakia	2,181	2,174	2,224	99·7	97·8	53,735	51,098	32,942	95·1	155·1
Canada	1,842	2,105	461	114·3	453·7	21,455	32,373	7,350	150·9	440·4
United States	4,528	6,210	4,927	137·1	126·0	61,675	95,497	67,773	154·8	140·9
Chile	3	3	5	101·7	65·8	50	67	89	134·6	74·6
Totals	**40,694**	**44,402**	**38,008**	**109·1**	**116·8**	**819,413**	**800,061**	**592,073**	**97·6**	**135·1**
Barley—										
Germany	2,809	2,847	2,866	101·4	99·3	89,061	73,838	79,521	82·9	92·9
Austria	266	309	236	116·0	130·8	5,481	5,190	4,123	94·7	125·9
Belgium	96	80	84	83·9	95·2	5,117	3,438	3,900	67·2	88·2
Bulgaria	551	534	554	97·0	96·3	13,241	11,941	9,451	90·2	126·4
Denmark	628	667	598	106·1	111·5	27,548	30,406	22,611	110·4	134·5
Spain	4,335	4,080	4,135	94·1	98·7	89,321	77,534	85,519	86·8	90·7
Serb-Croat-Slovene State	910	941	927	103·4	101·6	13,378	10,523	13,199	78·7	79·7
Finland	297	297	287	100·0	103·4	4,939	4,557	4,771	92·3	95·5
France	1,679	1,623	1,571	96·7	103·3	38,319	39,535	32,334	103·2	122·3

England and Wales	1,436	1,363	1,488	94·9	91·6	42,472	40,544	47,675	95·5	85·0
Scotland	171	157	172	91·8	91·3	5,912	5,888	6,277	99·6	93·8
Ireland	175	171	181	97·7	94·4	5,712	6,880	7,684	120·4	89·5
Hungary	1,184	1,130	1,266	95·4	89·2	21,408	20,876	22,586	97·5	92·4
Italy	540	539	503	99·7	107·0	10,362	7,578	8,283	73·1	91·5
Latvia	361	388	306	107·5	–	6,496	6,770	3,054	104·2	–
Norway	156	132	137	84·8	96·6	4,279	4,483	4,778	104·8	93·8
Netherlands	62	62	57	101·4	109·6	3,315	2,866	2,452	86·4	116·9
Poland	2,451	2,825	1,944	–	–	56,205	59,559	38,567	–	–
Portugal	144	191	183	132·3	104·4	1,610	3,141	1,488	195·1	211·1
Rumania	3,878	4,269	3,460	110·1	123·4	45,254	93,780	67,606	207·2	138·7
Sweden	400	427	424	106·7	100·7	12,326	13,830	12,070	112·2	114·6
Switzerland	16	16	19	98·5	85·3	552	482	637	87·4	75·8
Czecho-Slovakia	1,613	1,668	1,711	103·4	97·5	47,472	46,352	37,238	97·6	124·5
Canada	2,796	2,600	2,509	93·0	103·6	59,709	71,865	58,963	120·4	121·9
United States	7,414	7,390	8,150	99·7	90·7	154,946	186,110	197,443	120·1	94·3
Cyprus	130	118	120	90·7	97·9	2,234	1,976	2,474	88·4	79·9
Japan	2,929	2,746	2,941	93·8	93·4	87,884	102,240	93,648	116·3	109·2
Algeria	2,508	2,868	2,829	114·4	101·4	48,226	19,805	36,772	41·1	53·9
Egypt	394	375	394	95·2	95·2	11,941	11,306	11,433	94·7	98·9
French Morocco	2,472	2,548	2,147	103·0	118·6	37,248	27,230	33,104	73·1	82·3
Tunis	1,230	603	1,173	49·0	51·4	11,482	1,837	6,788	16·0	27·1
Chile	140	147	120	104·8	122·6	5,376	6,074	4,107	113·0	147·9
Totals	**44,171**	**44,111**	**43,492**	**99·9**	**101·4**	**968,826**	**998,434**	**960,556**	**103·1**	**103·9**
Oats—										
Germany	7,816	7,912	7,668	101·2	103·2	324,602	260,373	302,157	80·2	86·2
Austria	664	704	617	105·9	114·0	17,883	17,018	13,924	95·2	122·2
Belgium	604	717	573	118·9	125·1	33,153	33,679	21,076	101·6	159·8
Bulgaria	407	352	345	86·4	101·9	10,609	8,606	6,592	81·1	130·6
Denmark	1,112	1,119	1,009	100·6	110·8	49,091	54,921	43,155	111·9	127·3
Spain	1,576	1,514	1,497	96·1	101·1	33,521	29,378	31,320	87·6	93·8
Serb-Croat-Slovene State	1,003	983	1,029	98·0	95·6	17,795	16,519	20,934	92·8	78·9
Finland	1,038	988	1,069	95·2	92·5	26,380	26,540	22,898	100·6	115·9
France	8,421	8,198	7,787	97·3	105·3	230,078	271,290	214,423	117·9	126·5
England and Wales	2,147	2,157	2,392	100·5	90·2	80,264	74,312	106,040	92·6	70·1
Scotland	1,012	988	1,084	97·6	93·4	38,344	38,496	49,358	100·4	78·0
Ireland	1,254	1,214	1,378	96·8	88·1	46,144	50,536	77,052	109·5	65·6
Hungary	885	818	802	92·5	102·0	20,672	20,958	20,995	101·4	99·8
Italy	1,199	1,191	1,143	99·3	104·3	35,553	28,076	30,915	79·0	90·8
Latvia	622	675	533	108·5	–	15,852	17,102	7,326	107·9	–
Norway	342	301	516	88·0	95·2	12,198	12,593	14,966	103·3	84·1
Netherlands	383	392	381	102·4	103·0	21,023	16,070	19,966	76·4	80·5
Poland	4,754	5,879	4,119	–	–	141,447	162,469	121,470	–	–
Portugal	403	482	538	119·6	89·6	5,286	11,924	4,454	225·6	267·7
Rumania	3,062	3,295	2,388	107·6	138·0	62,454	86,658	64,329	138·8	134·7
Sweden	1,757	1,799	1,836	102·4	97·9	72,093	74,310	65,412	103·1	113·6
Switzerland	53	51	67	96·6	76·1	2,857	2,321	3,653	81·2	63·5
Czecho-Slovakia	1,963	2,017	1,972	102·7	102·3	69,730	67,344	56,145	96·6	119·9

54.—Acreage and Production of Cereals and of Potatoes in Various Countries of the World, 1921 and 1922—con.

Countries.	1921.	1922.	Average 1916-20.	Per cent of 1921.	Per cent of average.	1921.	1922.	Average 1916-20.	Per cent of 1921.	Per cent of average.
	000 acres.	000 acres.	000 acres.	p.c.	p.c.	000 bush.	000 bush.	000 bush.	p.c.	p.c.
Oats—concluded.										
Canada	16,949	14,541	13,980	85·8	104·0	426,233	491,239	432,926	115·3	113·5
United States	45,495	40,693	42,456	89·4	95·8	1,014,907	1,143,994	1,329,514	112·7	86·0
Algeria	558	583	587	104·5	99·3	9,726	5,243	13,347	53·9	39·3
French Morocco	22	28	21	128·1	135·9	522	169	215	33·4	78·8
Tunis	165	112	153	67·9	72·9	3,891	746	2,886	19·2	25·8
Argentina	2,105	2,618	2,613	124·3	100·2	31,033	51,451	44,969	165·8	114·4
Chile	79	75	75	95·0	99·8	2,959	2,938	3,107	99·3	94·6
Uruguay	107	72	120	67·0	59·6	1,948	1,621	2,050	83·2	79·1
Totals	**107,957**	**102,468**	**100,748**	**94·9**	**101·7**	**2,858,248**	**3,078,894**	**3,147,574**	**107·7**	**97·8**
Corn—										
Austria	112	149	103	132·3	144·6	2,521	3,703	2,122	146·9	174·5
Bulgaria	1,418	1,313	1,407	92·6	93·3	34,386	15,479	20,851	45·0	74·2
Spain	1,178	1,159	1,169	98·5	99·2	24,808	26,832	27,080	107·8	99·1
France	814	790	787	97·0	100·4	10,393	13,621	12,690	131·1	107·3
Hungary	2,167	1,716	2,017	79·3	84·1	31,703	32,494	50,156	102·5	64·8
Italy	3,822	3,824	3,866	100·1	98·9	96,775	76,768	84,786	79·3	90·5
Poland	132	183	108	–	–	2,266	2,776	1,082	–	–
Rumania	8,510	8,411	8,143	98·8	103·3	110,935	116,050	182,033	104·6	63·8
Switzerland	5	4	6	82·5	69·8	218	185	274	84·7	67·6
Czecho-Slovakia	385	392	369	101·8	106·2	9,432	9,884	9,648	104·8	102·5
Canada	297	318	243	107·1	130·9	14,904	13,798	11,905	92·6	115·9
United States	103,740	102,428	105,073	98·7	97·5	3,068,568	2,890,712	2,836,325	94·2	101·9
Mexico	2,545	3,212	3,975	126·2	80·8	61,021	78,737	75,986	129·0	103·6
Philippines	1,344	1,329	1,111	98·9	119·7	15,854	14,645	13,603	92·4	107·7
Algeria	24	19	18	80·8	104·6	354	276	245	77·9	112·4
French Morocco	610	535	501	87·8	106·9	5,886	4,564	9,330	77·5	48·9
Argentina	7,344	7,851	8,442	106·9	93·0	176,174	153,143	188,573	86·9	81·2
Java and Madura	3,690	3,880	4,226	105·2	91·8	46,821	49,612	52,969	106·0	93·7
South Rhodesia	182	215	186	118·3	115·8	2,367	5,000	3,401	211·3	147·0
Totals	**138,319**	**137,728**	**141,750**	**99·6**	**97·2**	**3,715,476**	**3,508,279**	**3,583,059**	**94·4**	**97·9**

54.—Acreage and Production of Cereals and of Potatoes in Various Countries of the World, 1921 and 1922—concluded.

Countries.	1921.	1922.	Average 1916-20.	Per cent of 1921.	Per cent of average.	1921.	1922.	Average 1916-20.	Per cent of 1921.	Per cent of average
	000 acres	000 acres	000 acres	p. c.	p. c.	000 centals.	000 centals.	000 centals.	p. c.	p. c.
Potatoes—										
Germany	6,542	6,725	5,688	102·8	118·2	576,667	896,521	544,061	155·5	164·8
Austria	327	379	265	115·8	142·9.	18,364	23,877	13,419	130·0	177·9
Belgium	419	445	377	106·2	117·9	42,921	86,673	56,053	201·9	154·6
Bulgaria	19	20	20	102·8	99·4	990	816	586	82·5	139·2
Denmark	208	204	190	98·2	107·3	30,104	29,520	23,479	98·1	125·7
Spain	789	783	791	99·3	98·9	61,335	65,159	63,227	106·2	103·1
Finland	198	185	203	93·7	91·4	10,947	9,606	10,615	87·7	90·5
France	3,595	3,600	3,430	100·1	105·0	183,197	289,554	222,099	158·1	130·4
England and Wales	558	561	518	100·6	108·3	66,259	89,286	71,405	134·8	125·0
Scotland	154	157	153	102·3	103·0	23,296	26,701	21,778	114·6	122·6
Ireland	568	570	634	100·3	89·8	57,255	76,856	68,015	134·2	113·0
Hungary	665	467	626	70·2	74·5	27,539	20,315	45,581	73·8	44·6
Italy	763	778	742	102·0	105·0	35,016	27,889	30,894	79·6	90·3
Latvia	146	171	122	117·2	–	14,855	16,561	8,256	111·5	–
Lithuania	326	321	314	98·5	102·2	30,567	32,529	26,539	106·4	122·6
Norway	130	126	125	96·8	101·1	15,598	19,619	20,020	125·8	98·0
Netherlands	441	454	433	103·1	104·9	54,209	74,714	61,210	137·8	122·1
Poland	4,796	5,409	4,062	–	–	370,368	732,356	398,957	–	–
Portugal	45	68	65	149·1	103·6	3,635	3,907	3,580	107·5	109·1
Rumania	409	355	241	86·7	147·3	30,593	24,607	13,418	80·4	183·4
Sweden	365	400	386	109·6	103·6	41,116	44,873	39,815	109·1	112·7
Switzerland	113	112	136	99·2	82·2	15,224	14,892	17,699	97·8	84·1
Czecho-Slovakia	1,574	1,607	1,499	102·0	107·2	95,442	199,942	110,288	209·5	181·3
Canada	702	684	694	97·4	98·6	64,408	55,745	60,833	86·5	91·6
United States	3,941	4,331	3,889	109·9	111·4	216,995	270,711	224,055	124·8	120·8
Algeria	46	42	39	89·8	105·9	392	1,288	834	328·5	154·4
Tunis	3	3	2	105·0	135·3	88	99	81	112·5	122·0
South Rhodesia	3	3	2	114·9	152·6	55	65	61	117·3	105·9
Totals	**27,845**	**28,960**	**25,646**	**104·0**	**112·9**	**2,087,435**	**3,134,681**	**2,156,858**	**150·2**	**145·3**

62373—20½

World's Yield of Cereals and Potatoes in 1922.—In the 38 countries reporting their wheat crops to the International Institute of Agriculture, the average yield of wheat to the acre in 1922, as shown by Table 55, was 14·6 bushels, as compared with 14·5 bushels in 1921 and 13·6 bushels, the five-year average for the period 1916 to 1920. The average yield of rye to the acre in the 24 countries reporting was 18 bushels, as against 20·1 bushels in 1921 and 15·6 bushels, the five-year average. Of barley, the average yield per acre in the 32 countries reporting in 1922 was 22·6 bushels, as compared with 21·9 bushels in 1921 and 22·1 bushels the five-year average. Of oats, the average yield in the 31 countries reporting in 1922 was 30 bushels, as against 26·5 bushels in 1921 and 31·2 bushels, the five-year average. Of corn, the average yield in 1922 in the 19 countries reporting was 25·5 bushels to the acre, as compared with 26·9 bushels in 1921 and 25·3 bushels, the five-year average. Of potatoes, the average yield in 1922 in the 28 countries reporting was 108·2 centals to the acre, as compared with 75 centals in 1921, and 84·1 centals, the five-year average for the period 1916 to 1920.

55.—Yields per acre of Cereals and of Potatoes in Various Countries of the World, 1921 and 1922.

Countries.	1921.	1922.	Average 1916-20.	Countries.	1921.	1922.	Average 1916-20.
	bush. per acre.	bush. per acre.	bush. per acre.		bush. per acre.	bush. per acre.	bush. per acre.
Wheat—				**Rye—**			
Germany	30·2	21·1	24·6	Germany	25·4	20·1	20·2
Austria	17·3	15·8	14·2	Austria	17·4	15·6	13·4
Belgium	42·2	35·3	25·4	Belgium	38·0	34·6	22·1
Bulgaria	18·0	16·9	13·7	Bulgaria	17·2	16·9	13·1
Denmark	50·7	39·5	41·0	Denmark	21·8	26·1	23·3
Spain	13·9	12·2	13·6	Spain	15·7	14·9	14·8
Serb-Croat-Slovene State	14·0	11·4	12·1	Serb-Croat-Slovene State	12·6	8·9	12·4
Finland	14·1	13·4	13·9	Finland	17·1	13·4	15·9
France	24·3	19·2	17·5	France	19·9	18·0	15·7
England and Wales	35·3	31·2	29·9	Greece	14·2	11·9	11·7
Scotland	39·4	38·6	38·7	Hungary	17·3	16·0	13·9
Ireland	33·7	34·5	35·5	Italy	19·6	16·9	17·4
Greece	11·3	10·7	8·9	Latvia	17·5	11·7	9·6
Hungary	18·3	15·8	14·4	Norway	28·7	29·0	25·3
Italy	16·4	14·1	14·8	Netherlands	35·5	27·0	27·0
Latvia	17·1	13·6	10·0	Poland	18·9	17·6	10·2
Norway	24·0	26·0	24·8	Portugal	8·0	8·0	5·9
Netherlands	46·7	33·5	34·6	Rumania	11·3	14·0	12·1
Poland	17·9	16·5	12·7	Sweden	30·5	26·0	22·2
Portugal	7·4	8·7	8·9	Switzerland	31·6	30·7	–
Rumania	12·8	14·1	12·3	Czecho-Slovakia	24·6	23·5	14·8
Sweden	34·9	26·3	25·8	Canada	11·7	15·5	15·9
Switzerland	30·5	23·5	30·9	United States	13·6	15·4	13·8
Czecho-Slovakia	24·9	22·0	16·8	Chile	16·7	22·3	17·8
Canada	13·0	17·8	13·5				
United States	12·8	14·0	13·6	**Averages**	**20·1**	**18·0**	**15·6**
Cyprus	12·3	13·3	13·5				
India	9·7	13·0	11·4	**Barley—**			
Japan	21·3	22·5	22·5	Germany	31·7	25·9	27·8
Algeria	12·0	5·9	8·2	Austria	20·6	16·8	17·4
Egypt	25·4	24·1	25·2	Belgium	53·5	42·8	46·2
French Morocco	11·8	6·2	10·6	Bulgaria	24·0	22·4	17·0
Tunis	7·1	4·2	5·1	Denmark	43·9	45·6	37·8
Argentina	13·0	12·1	10·6	Spain	20·6	19·0	20·7
Chile	17·1	18·2	17·8	Serb.-Croat-Slovene State	14·7	11·2	14·2
Uruguay	12·2	7·4	9·8	Finland	16·7	15·4	16·6
Australia	13·3	11·1	11·9	France	22·8	24·4	20·6
New Zealand	29·9	29·8	27·9	England and Wales	29·6	29·7	32·0
				Scotland	34·6	37·5	36·5
Averages	**14·5**	**14·6**	**13·6**	Ireland	32·6	40·2	42·4

55.—Yields per acre of Cereals and of Potatoes in Various Countries of the World, 1921 and 1922—concluded.

Countries.	1921.	1922.	Average 1916-20.
	bush. per acre.	bush. per acre.	bush. per acre.
Barley—concluded.			
Hungary	18·1	18·5	17·8
Italy	19·2	14·1	16·5
Latvia	18·0	17·4	10·0
Norway	27·5	33·9	35·0
Netherlands	53·9	46·0	43·1
Poland	22·9	21·1	19·8
Portugal	11·1	16·4	8·1
Rumania	11·7	22·0	19·5
Sweden	30·8	32·4	28·4
Switzerland	33·9	29·9	33·9
Czecho-Slovakia	29·4	27·8	21·8
Canada	21·3	27·8	23·5
United States	20·9	25·2	24·2
Cyprus	17·2	16·8	20·6
Japan	30·0	37·2	31·8
Algeria	19·2	6·9	13·0
Egypt	30·3	30·1	29·0
French Morocco	15·1	10·7	15·4
Tunis	9·3	3·0	5·8
Chile	38·4	41·3	34·2
Averages	**21·9**	**22·6**	**22·1**
Oats—			
Germany	41·5	32·9	39·4
Austria	26·9	24·2	22·6
Belgium	54·9	46·9	36·8
Bulgaria	26·1	24·5	19·1
Denmark	44·2	49·1	42·8
Spain	21·3	19·3	20·9
Serb-Croat-Slovene State	17·7	16·8	20·3
Finland	25·4	26·9	21·4
France	27·3	33·1	27·5
England and Wales	37·4	34·5	44·3
Scotland	37·9	39·0	45·5
Ireland	36·8	41·6	55·9
Hungary	23·4	25·6	26·2
Italy	29·6	23·6	27·1
Latvia	25·5	25·4	13·8
Norway	35·7	41·9	29·0
Netherlands	54·9	41·0	52·4
Poland	29·8	27·6	29·5
Portugal	13·1	24·8	8·3
Rumania	20·4	26·3	26·9
Sweden	41·0	41·3	35·6
Switzerland	54·5	45·8	54·9
Czecho-Slovakia	35·5	33·4	28·5
Canada	25·3	23·8	31·0
United States	22·3	28·1	31·3
Algeria	17·4	9·0	22·7
French Morocco	23·7	6·0	10·3
Tunis	23·6	6·7	18·8
Argentina	14·7	19·7	17·2
Chile	37·5	39·2	41·4
Uruguay	18·2	22·5	17·1
Averages	**26·5**	**30·0**	**31·2**

Countries.	1921.	1922.	Average 1916-20.
	bush. per acre.	bush. per acre.	bush. per acre.
Corn—			
Austria	22·4	24·9	20·6
Bulgaria	24·3	11·8	14·8
Spain	21·1	23·1	23·2
France	12·8	17·2	16·1
Hungary	14·6	18·9	24·9
Italy	25·3	20·1	21·9
Poland	17·2	15·2	10·1
Rumania	13·0	13·8	22·4
Switzerland	45·4	46·3	48·1
Czecho-Slovakia	24·5	25·2	26·2
Canada	50·2	43·3	49·0
United States	29·6	28·2	27·0
Mexico	24·0	24·5	19·1
Philippines	11·8	11·0	12·2
Algeria	14·9	14·5	13·4
French Morocco	9·7	8·5	18·6
Argentina	24·0	19·5	22·3
Java and Madura	12·7	12·8	12·5
South Rhodesia	13·0	23·3	18·3
Averages	**26·9**	**25·5**	**25·3**
Potatoes—	centals per acre.	centals per acre.	centals per acre.
Germany	88·1	133·3	97·5
Austria	56·2	63·0	50·6
Belgium	102·4	194·8	148·7
Bulgaria	52·1	40·8	29·3
Denmark	144·7	144·7	123·6
Spain	77·7	83·2	79·9
Finland	55·3	51·9	52·3
France	51·0	80·4	64·8
England and Wales	118·7	159·2	137·8
Scotland	151·3	170·1	142·3
Ireland	100·8	134·8	107·3
Hungary	41·4	43·5	72·8
Italy	45·9	35·8	41·6
Latvia	101·7	96·8	67·7
Lithuania	93·8	101·3	84·5
Norway	120·0	155·7	160·2
Netherlands	122·9	164·6	141·4
Poland	77·2	135·4	98·2
Portugal	80·8	57·5	55·1
Rumania	74·8	69·3	55·7
Sweden	112·6	112·2	103·1
Switzerland	134·7	133·0	130·1
Czecho-Slovakia	60·6	124·4	73·6
Canada	91·7	81·5	87·7
United States	55·1	62·5	57·6
Algeria	8·5	30·7	21·4
Tunis	29·3	33·0	40·5
South Rhodesia	18·3	21·7	30·5
Averages	**75·0**	**108·2**	**84·1**

III.—FORESTRY.[1]

1.—Physiography, Geology and Climate from a Forestry Viewpoint.

The Dominion of Canada may be roughly divided into three main drainage areas; the Pacific slope west of the Rocky mountains, the Great Plains region draining into the Arctic and Hudson bay, and the basin of the Great Lakes and the St. Lawrence together with the Maritime Provinces. These three regions support three distinct types of forest growth.

1.—The Pacific Slope.

The Pacific slope is characterized by numerous systems of mountains running approximately parallel and extending from the southeast to the northwest. The Rocky mountains vary in elevation from 5,000 to 10,000 feet above sea level, with individual peaks extending well above 10,000 feet. Between this system and the Pacific are the Selkirk, Caribou and Coast mountains and lesser ranges, terminating with the sunken range whose upper elevations form Vancouver island, the Queen Charlotte group and other coast islands. The chief rivers follow the valleys between these ranges, breaking through in some cases along the shorter cross valleys from east to west.

The Rocky mountains are formed chiefly of Palaeozoic rocks, as are also the islands on the coast. The Coast range is almost entirely granitic and the Selkirks, Pre-Cambrian or Cambrian. The intervening ranges are of mixed formations, varying from rocks of sedimentary origin to granites. The best soil in British Columbia is concentrated in valley bottoms or alluvial deltas, and the purely agricultural area has been estimated at 20,700 square miles or about 6 p. c. of the land area.

The climate along the coast is mild and humid, with a mean annual temperature varying from 44° to 49° F. The precipitation is the heaviest in Canada, varying from 40 to 120 inches. The greater part of this precipitation falls during autumn and winter, however, only 30 p.c. falling during the growing season, to which fact is sometimes ascribed the scarcity of deciduous-leaved forest growth which requires more moisture during the growing season. In any case, coniferous tree growth in this region is the most luxuriant in Canada, and the forests have the most rapid rate of growth, the largest individual trees and the heaviest stands of timber in Canada, extending from sea level up to elevations of 3,500 or 4,000 feet. The Interior Dry Belt of British Columbia has a low annual precipitation, varying from 10 to 20 inches. Extremes of temperature from 100° F. to −45° F. make this a region unfavourable to tree growth. The winds from the Pacific which precipitate most of their moisture on the Coast range cross this interior plateau and give up a large part of what remains when they reach the Selkirk and Rocky ranges, forming what may be termed the Interior Wet Belt, centered in the Columbia valley. Here the precipitation varies from 30 to 60 inches, taking the form of snow in higher altitudes. Temperature varies from 100° F. to −17° F. In the Rocky Mountain range itself the climate is more extreme and variable than to the westward.

2.—The Great Plains.

East of the Rockies lies the Great Plains region, composed of a variety of topographical types. From the foothills of the Rockies, the country slopes gradually

[1] Prepared in co-operation with the Forestry Branch, Department of the Interior.

eastward and northward. The prairie country extends from the international boundary to the 55th parallel along the foothills, gradually tapering down toward the east to a point near the lake of the Woods. This area is now almost entirely treeless, with rich fertile soil and is at present a purely agricultural or pastoral country. Whether its present treeless condition is due to climatic or other causes is problematical, but the presence of isolated patches of tree growth in situations well protected from fires would seem to indicate that repeated burning accounts, at least in part, for its present treeless state. The underlying rocks are of the Tertiary and Mesozoic ages. The climate of Alberta is extremely variable in winter, due to a warm dry wind known as the "Chinook" which blows from the south and southwest and extends its influence from the international boundary to the Peace river and eastward to Regina in Saskatchewan. In summer the isotherms run almost due north and south in Alberta. Rainfall varies from 15 to 20 inches. The temperature in Manitoba has an absolute recorded range of 150° F., with a mean range of 71°. Saskatchewan and Alberta are more temperate, especially where they are affected by the "Chinook." North of the treeless prairies is a region, largely unexplored, covered at first by a comparatively light forest growth which toward the north and east gives way to the sub-Arctic "tundra"—a region of muskeg and bare, glacier-worn rocks of the Laurentian and Pre-Cambrian types.

These Laurentian rocks in Canada form the Archæan or Canadian Shield, with a distinct type of topography. This rock formation covers a huge irregular triangle with its apex near the Thousand Islands in the St. Lawrence, from which point one arm extends northwesterly to the mouth of the Mackenzie river and the other northeasterly down the St. Lawrence valley to include the Labrador peninsula. This entire region has been reduced to a peneplain condition by repeated glacial action, which has worn down the high elevations and scoured out most of the soil except in isolated depressions. It is covered with innumerable lakes, muskegs or bogs and rivers. The climate in the northern portion is as a rule too severe for continuous successful agriculture, but this region is covered by a comparatively light forest growth gradually thinning out toward the north and toward Hudson bay and James bay to the "tundra" type referred to. The southern portion of the shield is to a great extent agricultural land, actual or potential, much of it being still heavily forested.

3.—The St. Lawrence and Atlantic Slope.

The basin of the St. Lawrence and the Great Lakes contains a variety of topographical and geological types. The north shores of lake Superior and Georgian bay, the upper Ottawa river valley and the southern part of Labrador are part of the Laurentian Shield already described. Here the climate is tempered in part by the presence of the Lakes and the gulf of St. Lawrence, but is nevertheless severe and variable. To the south, soil and climate improve and the southwestern peninsula of Ontario, the north shore of lake Ontario and the St. Lawrence valley are all essentially agricultural land. The rock is of sedimentary origin of the Palaeozoic age.

The Maritime Provinces, with a general slope toward the Atlantic, are varied in topography and geology. The climate resembles that of southern Ontario, being modified by the presence of the ocean. Precipitation is above 35 inches annually. This region supports a type of forest similar to that of the southern portion of the Archæan Shield.

2.—Main Types of Forest Growth.

Physiographic, climatic and soil conditions in Canada, generally seem to favor the coniferous type of forest. While the more fertile portions of Ontario, Quebec and the Maritime Provinces supported a heavy virgin growth of hardwoods, the greater part of Canada's forest area is covered with spruce, pine, balsam, Douglas fir and other coniferous softwoods. Three main groups of forest growth in Canada follow the main physiographic divisions already mentioned. These groups are, the Cordilleran, the Great Plains and the Eastern forests.

1.—The Cordilleran Forest.

The Cordilleran forest, which covers the greater part of the Pacific slope, may be sub-divided into the Coast belt, the Interior Dry belt, the Interior Wet belt and the Rocky Mountain belt. The Coast belt includes several distinctive forest types, their character being determined by variations in climatic and topographic conditions, among which altitude and precipitation have had the greatest effect on forest growth. Douglas fir and red cedar are the principal species in the southern portion of the belt at altitudes up to 2,000 or 2,500 feet. With these are associated hemlock, white pine, amabilis and lowland fir. Toward the north and at higher altitudes Douglas fir disappears and red cedar and hemlock are the important trees, with amabilis fir and yellow cypress as subsidiaries. In the Queen Charlotte islands and along the coast of the mainland opposite, Sitka spruce and western hemlock form a lowland type.

Western yellow or "bull" pine predominates at low altitudes, bordering on the grass lands in the Interior Dry belt. Douglas fir gradually increases in importance until it predominates at elevations up to 3,500 and 4,500 feet. Western larch covers a limited area between the true yellow pine and Douglas fir types. At the northern latitudinal and upper altitudinal limits of the Douglas fir type, an Engelmann spruce type develops which merges into a spruce-alpine fir type at still higher altitudes. Lodgepole pine has taken the place of Douglas fir, Engelmann spruce, and, in some cases, yellow pine on burned-over areas, and has become to a considerable extent established as a distinct type.

Forest types similar to those of the coast have developed in the Interior Wet belt. In the southern portion of this belt, red cedar predominates in the wetter situations, mixed with Douglas fir, Engelmann spruce, white pine, hemlock, western larch, alpine or lowland fir and cottonwood. On the benches and lower valley slopes, hemlock and cedar are the important species. Engelmann spruce replaces hemlock at higher elevations, cedar gradually disappears and the spruce-alpine fir type stretches up to timber line. To the north, Engelmann, spruce and alpine fir are more prominent, and the other species are gradually eliminated.

The Rocky Mountain belt includes portions of the Dry belt types to the south and those of the Interior Wet belt further north. Otherwise the typical forest of the Rocky mountains is made up of Engelmann spruce, with an increasing proportion of alpine fir as the altitude increases. This type has suffered so severely from fire, especially on the dry eastern slopes, that lodgepole pine has established itself permanently in some cases and temporarily in others on burned-over areas.

Most of the commercially important species of the Cordilleran region are confined to British Columbia. The spruce-fir-lodgepole pine type of the northern interior extends across the Rockies into the foot-hills of Alberta. Certain species such as Douglas fir, Engelmann spruce, lowland and alpine fir and lodgepole pine are also found in western Alberta, but in few cases do they extend any great distance eastward.

2.—The Forests of the Great Plains.

The Great Plains region may be divided into the Prairie, Northern Forest and Sub-Arctic belts. There are no great variations in altitude in the region, and soil conditions and latitude determine the distribution of forest types. The Prairie belt in southern Alberta, Saskatchewan and Manitoba extends north from the international boundary for 200 to 400 miles. Patches of tree growth in protected situations are made up chiefly of aspen poplar, with some white spruce and jack pine. North of this purely agricultural and pastoral area is the great Northern Forest belt, from 300 to 400 miles wide, which extends from Alaska to Labrador, covering the northern part of the Laurentian Shield as far as the limits of commercial tree growth. Originally, white spruce predominated over this entire belt and it still forms the most important type commercially, although it has suffered severely through forest fires. In the east, balsam fir is an important associate and the spruce-balsam fir type makes up most of the pulpwood resources of eastern Canada. The black spruce-eastern larch (tamarack) type occupies poorly drained areas within this belt. Enormous areas have been burned over by forest fires. Aspen poplar has replaced the spruce and balsam on the best soil in these areas, and is now the most prevalent species, although this condition may not be permanent. Jack pine has taken possession of the dryer, lighter soils, in some cases permanently. Paper birch comes in with aspen poplar toward the east, and balsam poplar occurs in the moister situations. Jack pine, aspen and balsam poplar reach a higher development along the Peace river in northern Alberta than they do elsewhere in America. Along its northern margin this belt merges into the sub-Arctic "tundra", with tree growth confined to narrow strips along waterways. To the northward, balsam fir disappears early from the forest growth, followed by balsam poplar, jack pine, aspen and paper birch, leaving white spruce, black spruce, tamarack or larch, and willow to define the northern limit of tree growth. This may be roughly indicated by a line drawn from the mouth of the Mackenzie river on the Arctic ocean to the mouth of the Churchill river on Hudson bay and across the Labrador peninsula at about 58° N. latitude.

3.—The Eastern Forests.

In southeastern Canada a number of belts of forest growth with distinctive characteristics are recognized. The hardwood belts include the Carolinian zone, confined to the north shore of lake Erie and the western part of lake Ontario. This is important only as forming the northern fringe of a type which covers a large area in the Central Eastern United States, and includes a number of species not found elsewhere in Canada. North of this zone, still in the purely agricultural and pastoral area, the original forests were of the commercially important hardwoods, such as maple, elm, basswood, oak, yellow birch, hickory and beech, with patches of pine, hemlock and other conifers on the lighter soils. This area has been largely cleared and devoted to agriculture, and the original forest type is to be seen only on farmers' wood lots.

Since the beginning of the lumbering industry in Canada the region north of this belt, extending, roughly speaking, to the height of land between the St. Lawrence and Hudson bay waters, has been the centre of the most extensive exploitation and still occupies that position as far as eastern Canada is concerned. The forest types which still exist in this region vary considerably owing to soil and other conditions, but generally speaking white pine occupies the better situations on the lighter soils, and reaches its highest development in this belt. With it is sometimes associated the red or Norway pine. On heavier soils spruce, hemlock

and the commercial hardwoods occupy a minor position. Cedar, tamarack and black spruce form typical stands in poorly drained situations. Hardwood ridges, carrying chiefly maple and yellow birch, occur throughout this belt. The extensive lumbering operations of the past century, together with repeated forest fires, have greatly modified these original types. The exclusive cutting of white and red pine, practised until recently, has resulted in the displacement of these species by spruce, balsam fir, jack pine and the hardwoods, the spruce-balsam fir pulpwood areas being the most valuable type remaining. Jack pine has come in extensively on burned-over areas on lighter soils, and aspen and paper birch are being rapidly established. Along its northern border, this mixed hardwood and softwood type merges into the Northern Forest belt already described, with the disappearance of the white and red pines, hemlock and the commercial hardwoods.

The Acadian belt covers the Maritime provinces and the south shore of the St. Lawrence in Quebec. The forest is similar to that of the New England states, being characterized by red spruce. With this are found varying proportions of white spruce and balsam fir. In the mixed softwood and hardwood type, which also occurs in this belt, white pine and hemlock occur, with yellow birch, maple and beech representing the commercial hardwoods. Cedar is fairly abundant in the western portion of this region. Burned-over areas in the Acadian belt are chiefly occupied temporarily by aspen and white birch.

3.—Important Tree Species.

In Canada there are approximately 160 different species and varieties of plants reaching tree size. Only thirty-one of these are coniferous, but the wood of these forms 80 per cent. of our standing timber and 95 per cent. of our sawn lumber. While the actual number of species of deciduous-leaved trees seems large in comparison to their commercial importance, out of a total of some ninety species and varieties only four or five are worthy of comparison with the conifers.

Spruce.—The five native spruce species are all of commercial importance, furnishing nearly one-third of the total production of lumber. Spruce pulpwood is used in preference to all others, and forms over two-thirds of the total quantity of pulpwood consumed in Canadian pulp mills and exported in the raw or unmanufactured state. The wood has a long, tough, colourless fibre, and, on account of its freedom from resin, is considered in the markets of the world to be the best material for pulp manufacture. Spruce is also used for railway ties, poles, cooperage and mining timbers. Of the five native spruce species the white spruce (*Picea canadensis*) is the most abundant and the most important commercially. With black spruce (*Picea mariana*) it ranges from Labrador to Alaska, extending northward almost to the limit of tree-growth and southward into the United States. The black spruce (*Picea mariana*) is of less value, as it is a smaller, slow-growing tree, often confined to swampy situations and reaching sawlog or pulpwood sizes only under more favourable conditions of growth. The red spruce (*Picea rubra*) is confined to the province of Quebec and the Maritime provinces. Its wood is considered to be of greater technical value than that of the other spruce species. The western species, Engelmann and Sitka spruce (*Picea Engelmanni* and *Picea sitchensis*), are not found east of the Rocky mountains. Their wood is of high technical value, and can usually be obtained in larger dimensions than that of the other spruces, as the trees attain great size in this region.

Pine.—There are nine distinct pine species native to Canada, of which six are of great commercial importance. Eastern white pine (*Pinus Strobus*) is the

most valuable coniferous wood in Canada. Up to a few years ago it was the most important wood in Canada in point of quantity of lumber sawn and square timber (Quebec pine) exported. Owing to increased scarcity of good material, the wood has fallen off in production till its place at the head of the list has been taken by the spruces and Douglas fir. The wood of the white pine is soft, easy to work, fairly durable and strong in comparison to its weight. In addition to these properties, its most valuable quality is that of holding its shape with a minimum of shrinkage or swelling. The western white pine (*Pinus monticola*) is similar in most respects to the eastern species. It does not form extensive pure stands, seldom comprising more than 5 p.c. of the trees on a given area. It is confined to the province of British Columbia, while the eastern white pine is found from eastern Manitoba to the Atlantic sea-board.

The wood of the red or Norway pine of eastern Canada (*Pinus resinosa*) is harder and more resinous than white pine, and the tree is a valuable source of structural timber, as well as of sawn lumber. The wood of the western yellow or "bull" pine of the interior of British Columbia (*Pinus ponderosa*) is softer and lighter in colour than red pine, and is now used extensively as a substitute for white pine. The two jack pines (*Pinus Banksiana* of the east and north, and *Pinus Murrayana* of the Rocky mountains and British Columbia) are not considered as valuable lumber-producing trees, although they are both used locally for rough construction. Jack pine railway ties are used to an enormous extent, chiefly on account of the strength, cheapness, and abundance of the wood. Jack pine has a well-established use in the manufacture of kraft pulp, and its use in the manufacture of pulp for newsprint is now being developed. There are three other species of the genus *Pinus* that reach tree size in Canada, but these are only of local importance.

Douglas Fir.—The Douglas fir (*Pseudotsuga taxifolia*) of British Columbia and the Pacific coast, often erroneously called "Oregon pine," is the only representative of its genus in Canada. It probably yields more lumber annually than any other single species in America. The tree in Canada is not found east of the Rocky mountains, the greater part of the lumber being produced in the Coast region of British Columbia. This is Canada's largest tree, and from it larger structural timbers can be obtained than from any other tree in America. It is used chiefly for structural purposes, but on account of its attractive appearance it is also used extensively for interior finish. The wood is also important in Canada as a material for railway ties and mining timbers. It is noted chiefly for its strength and durability, and the large dimensions in which it can be obtained.

Hemlock.—There are three hemlock species in Canada's forests, two of which are valuable timber trees. The eastern hemlock (*Tsuga canadensis*) is abundant throughout its range in the eastern provinces, but is not found west of the province of Ontario. The wood is used chiefly for construction, especially in house framing. It supplies the demand for a cheap, strong material for many purposes, including railway ties, poles, mining timber, pulpwood, and firewood, and its bark is a valuable source of tannin. The western hemlock (*Tsuga heterophylla*) is found in Canada only in the province of British Columbia, and is becoming more valuable each year as its qualities are better appreciated. The western species is used more extensively than the eastern in pulp manufacture.

Balsam Fir.—There is only one balsam fir in northern and eastern Canada (*Abies balsamea*), which is found from Labrador almost to Alaska. Its wood is sawn into lumber only to take the place of more valuable woods for rough construction,

as it has few technical qualities which would recommend it for any other use as lumber. The purpose for which the wood is best suited is the manufacture of wood-pulp for paper making. The tree occurs in the forest mixed with spruce and it is cut and marketed with that wood. Balsam fir has the requisite length and toughness of fibre for pulp-making, and, in spite of the fact that it gives a slightly lower yield of pulp per cord and contains a higher percentage of resin than spruce, its use is increasing.

There are three western balsam fir species, the wood of which is very similar to that of the eastern tree. The most important of these at present is probably the Alpine fir (*Abies lasiocarpa*). Where the wood of these western species is utilized it is put to uses similar to those of the eastern species. These western balsams are confined to the Rocky mountains and the Pacific slope.

Cedar.—There are only two species of the genus *Thuja*, commonly called "cedar" in Canada. They are both of great commercial importance, each in its own region, as their ranges do not overlap. The wood of the cedars is the most durable coniferous wood grown in the Dominion. The eastern tree, white cedar (*Thuja occidentalis*), is found from the Atlantic to the southeastern part of Manitoba. It does not extend as far north as some of the other conifers and is nowhere very plentiful, being confined to moist situations. Cedar is preferred to all other native woods for shingles and for all structural work exposed to moisture. In spite of the fact that the wood is not strong, its great durability in contact with the soil makes it a valuable railway tie material. It is used in enormous quantities both locally and for export for poles and fence-posts, and its use for this latter purpose is largely responsible for the increased scarcity of the lumber, as young trees are used before they have time to reach sawlog sizes. The western red cedar (*Thuja plicata*) is one of the giants of the Pacific Coast, being surpassed in size only by Douglas fir. Its wood is sawn into lumber of large dimensions and is made into shingles to a greater extent than any other wood in Canada.

Tamarack or larch.—Of the three native tamarack or larch species, two are worthy of note. The eastern tamarack (*Larix laricina*) is found in every province in the Dominion in swampy situations. Its wood is hard, strong, and durable, being similar to that of Douglas fir and the southern hard pines. The western larch (*Larix occidentalis*) is more important commercially. It is found only in the interior of British Columbia, but grows on better sites and reaches greater size than the eastern tree. The wood of these two species is cut into lumber and also used for railway ties and mining timbers.

Birch.—Birch is Canada's most important hardwood, and one of the few woods of this class where the exported material exceeds that imported. There are at least seven native species, but only two are worthy of any detailed discussion. The yellow birch (*Betula lutea*) is the source of the most valuable birch lumber, used for flooring, furniture, cabinet-work and vehicle stock. The tree grows only in Ontario, Quebec and the Maritime Provinces, and does not reach commercial dimensions north of the Height of Land between the St. Lawrence river and Hudson bay. Its wood is hard, heavy, strong, and tough, but is not durable in contact with moisture.

The paper birch (*Betula alba var. papyrifera*) has a much wider distribution, being common from the Atlantic to the Rocky mountains, and is more abundant throughout its range than the yellow birch. Its wood is softer, weaker and less durable, and is not at present of great commercial value, except for spoolwood

and certain similar classes of turnery. The tough resinous bark of this tree has supplied the aborigines for centuries with the material for covering their famous birch-bark canoes.

Maple.—The maple, whose leaf is the national emblem of Canada, is our second most important hardwood, and is represented in Canada by nine or more species scattered from the Atlantic to the Pacific. Only one species, however, can be considered here. The sugar maple, or hard maple (*Acer saccharum*), produces the most valuable lumber and, like birch, is used for furniture, vehicle stock, and interior house finishing. The sap of this tree is the principal source of the maple syrup and sugar of commerce.

Basswood.—Basswood (*Tilia americana*) is a valuable wood for cabinet-work of all kinds, but being restricted in distribution and in great demand, the available supply is rapidly disappearing.

Minor Species.—Elm, represented by three species in Canada, is a valuable vehicle wood. Beech, ash, oak, butternut, chestnut, hickory, cherry, black walnut, tulip, black gum, red alder, sycamore, and sassafras are all valuable woods and are still sawn into lumber in Canada, but in many cases the supply, which was never large, has dwindled almost to insignificance.

The poplar species (*Populus sp.*), of which there are seven native to Canada, like paper birch and jack pine, produces great quantities of material which will eventually become valuable, when its qualities are better appreciated and when the scarcity of the more valuable of the better understood woods will make its careful utilization imperative.

4.—Forest Resources.

The total land area of Canada is approximately 3,600,000 square miles. Land suitable for agriculture, including pastoral land, has been estimated at 469,000 square miles, of which about 90,000 square miles are at present devoted to field crops. The area covered by existing forests covers approximately 950,000 square miles, some of which is agricultural land. Less than half of this carries merchantable timber (6 inches in diameter), and only about a quarter carries saw timber (10 inches in diameter). The balance of the forested area carries young stands which have come up after fire or cutting. On a considerable proportion of this area the succeeding stands are inferior to the original forests. Under present conditions about a quarter of the timber of commercial size is commercially inaccessible, so that the forests on about two-thirds of our forest area are either too small or too expensive to be operated profitably. This is not a permanent condition, since accessibility depends primarily on market standards, current prices and transportation facilities, and all these factors are tending to increase the extent to which standing timber can be utilized. Young stands, as they reach maturity, also increase the area of accessible timber, and areas of farm land unsuitable for agriculture are eventually abandoned and revert to forest.

On the other hand, forest fires, windfall, insect and fungus damage and commercial operations tend to reduce the area. Certain forest areas are cleared and devoted to agriculture. Only when systematic land classification has been completed can the total area of absolute forest land, be determined *i.e.* land capable of forest production but not suitable for agriculture.

About 245,000 square miles of forest land in Canada has been set aside in forest reserves or parks or otherwise permanently dedicated to forest production. Dom-

inion reserves and parks cover about 45,000 square miles in Manitoba, Saskatchewan, Alberta and the area under Dominion control in British Columbia. The other provincial areas in square miles are as follows:—Quebec, 174,000; Ontario, 23,000; British Columbia, 3,000.

For a large proportion of the present forest area of Canada, there is little reliable information. Comprehensive forest surveys have been made only for the provinces of Nova Scotia and British Columbia. Reports of these surveys were published by the Commission of Conservation. A survey of conditions in Ontario, commenced by that Commission, is now being completed by the Dominion Forestry Branch in co-operation with the Provincial Forest Service. Extensive areas in the three Prairie Provinces have been examined by the Dominion Service, but the extent of their total resources is still undetermined. The New Brunswick Provincial Service has examined sixty per cent. of that province's Crown timber lands and the Forest Service of Quebec is also collecting data as to the forests under its control.

The estimates given here for both area and quantity are based on data insufficient for accuracy; they must be accepted as being subject to revision as more complete information becomes available.

Table 1 gives a rough distribution of these quantities and indicates that the greater part of the raw material in the Dominion is to be found in British Columbia, but that over forty per cent. of the total resources, including all classes of forest products, is to be found in Ontario, Quebec and the Maritime Provinces.

1.—Estimated Stand of Timber of Merchantable Size in Canada, by Regions, 1922.

Region.	Saw-material.		Pulpwood, Cordwood, Posts, etc.	
	1,000 ft. B.M.	1,000 cu. ft.	1,000 cords.	1,000 cu. ft.
SOFTWOOD.				
Eastern Provinces	76,101,000	16,666,115	552,210	64,700,590
Prairie Provinces	17,985,000	3,938,715	272,010	31,825,170
British Columbia	345,762,000	75,721,878	47,500	5,557,500
Total Softwood	**439,848,000**	**96,326,708**	**871,720**	**102,083,260**
HARDWOOD.				
Eastern Provinces	32,134,500	7,037,430	209,815	20,342,417
Prairie Provinces	9,305,000	2,037,795	196,010	18,620,950
British Columbia	788,000	172,572	2,160	205,200
Total Hardwood	**42,227,500**	**9,247,797**	**407,985**	**39,168,567**
Grand Total	**482,075,500**	**105,574,505**	**1,279,705**	**141,251,827**

5.—Forest Administration.

1.—Administration of Dominion and Provincial Timber Lands.

The Dominion Government administers Crown lands, including timber lands, in the provinces of Manitoba, Saskatchewan and Alberta and in the Railway Belt and Peace River Block of British Columbia.

In all other cases timber lands are administered by the provinces in which they occur. On the area under Dominion control and in most of the provinces, only the right to cut timber is disposed of, the title to the land remaining in the Crown, so that there are few privately owned timber lands other than farmers' wood lots. As new regions are explored, their lands are examined and the agricultural land disposed of. Absolute forest land is usually set aside for timber production, and the policy of disposing of the title to lands fit only for the production of timber has been virtually abandoned in every province in Canada. The ownership of forests by

towns and communities, so common in Europe, is almost unknown in Canada, although efforts are being made to encourage the establishment and maintenance of forests of this nature.

Dominion Timber Lands.—Dominion timber lands are administered by three different branches of the Department of the Interior at Ottawa. The Forestry Branch is chiefly concerned with forest reserves and fire protection, the Timber and Grazing Branch deals with timber berths, and the Dominion Parks Branch administers the Dominion parks, which are primarily national playgrounds and game preserves and on which the timber is reserved. The Board of Railway Commissioners for Canada has charge of fire protection along lines subject to its jurisdiction.

Forest reserves are primarily intended to supply the surrounding settlements with timber for local use, and to protect the watersheds. The method of disposal of this timber and the conditions under which it can be removed are such that regeneration of the natural forest is as well provided for as possible without actual replanting of cut-over areas. On all other Dominion timber lands, licenses to cut timber, renewable annually, are granted for stated areas. Regulations provide for cutting to a diameter limit and disposal of logging *débris*.

The export is prohibited of raw or unmanufactured timber cut from Dominion Crown lands and provincial Crown lands in every province but Nova Scotia.

British Columbia.—In the province of British Columbia, the Forest Branch of the Department of Crown Lands has administered timber lands since 1912. All unalienated lands in the province which are examined and found to be better suited to forest than to agricultural production, are dedicated to forest production, and all timber lands carrying over a specified quantity of timber are withdrawn from disposal until examined by the Forest Branch. The present practice is to sell cutting rights for a stated period by public competition. The royalties are adjusted every five years on the basis of the average selling price of lumber. About 1,387 square miles of timber land is privately owned.

Ontario.—In the province of Ontario, timber lands are administered by the Department of Lands and Forests. The sale of saw timber is by tender after examination. Conditions cover the removal within a specified period, disposal of *débris*, etc. Pulpwood areas are usually disposed of by individual agreements for 21 years. Manufacture in Canada has been made a condition in the disposal of all softwood saw timber since 1897 and all pulpwood since 1900. In some of the individual pulpwood agreements the licensee must undertake not only to erect a pulp mill but also a paper mill within the province, the type of mill being stipulated in the agreement. In this province about five million acres of forest land were disposed of outright before the licensing system became universal.

Quebec.—The Forest Service of the Department of Lands and Forests administers the timber lands in Quebec; its powers include the classification of land, disposal of timber and regulation of cutting operations. Licenses are granted after public competition and are renewable from year to year, subject to changes in royalty by the government at any time. Grants of land in fee simple, made in some cases under the French *régime* in Quebec, are responsible for the private ownership of about six million acres of forest land.

New Brunswick.—The Forest Service under the Department of Lands and Mines and a special Forestry Advisory Board, form the forest authority in New Brunswick. At present timber lands are disposed of as in the other provinces, but in the past several grants of forest land were made to railway companies, private

concerns and individuals, who now own in fee simple about seven thousand square miles of forest land.

Nova Scotia.—In Nova Scotia the greater part of the forest land has passed into private ownership. What remains vested in the Crown is administered by the Commissioner of Crown Lands. Forest protection is conducted under the Commissioner of Forests and Game.

2.—Forest Fire Protection.

The protection of forests from fire is undoubtedly the most urgent and most important part of the work of the different agencies administering forest lands in Canada. In the case of the Dominion Government this duty falls chiefly on the Forestry Branch of the Interior Department for all Dominion Crown timber lands, whether within forest reserves or not. A special staff of railway fire guardians, under the Board of Railway Commissioners, is responsible for fire protection along railway lines through Dominion lands. These guards co-operate with the railway fire rangers employed by the various railway companies, the compulsory patrol of all lines throughout the country being a Dominion law. Other Dominion legislation regulates the use of fire for clearing and other legitimate purposes and provides for closed seasons during dangerous periods.

Each of the provincial governments maintains a fire protection organization which primarily covers unoccupied Crown timber lands, but frequently co-operates with owners and licensees for the protection of all timbered areas, the cost being distributed or covered by special taxes on timber lands. An interesting development in this connection in the province of Quebec is the organization of a number of co-operative protection associations among lessees of timber limits. These associations have their own staffs, which co-operate with those of the Board of Railway Commissioners and the Provincial Government. This latter contributes in the way of money grants and also pays for the protection of vacant Crown lands lying within the areas of the associations' activities.

The simplest form of patrol is carried on by men, travelling generally in pairs, on foot, on horseback or in canoes. The fire protective systems in use throughout Canada have been improved by the following measures: the extension of roads, trails and portages, the building of telephone lines throughout the forest, the establishment of lookout towers and stations, and the use of air craft for detecting and reporting incipient fires and carrying men and supplies to fires already started, patrol by automobiles, boats and railway speeders, maintenance at strategic points, of cabins for accommodation of patrolmen and supplies for fire fighting the use of portable forest fire pumps, the establishment of fire lanes and cleared fire guards through the forest and around fire hazards. In addition to these, certain legislative enactments have tended to reduce the fire menace. The establishment of closed seasons for brush burning by settlers during the dangerous dry periods has proved efficient, and the recently enacted law for Quebec, whereby all travelling in the woods during the fire season is regulated and restricted, has been of enormous value as a preventive measure.

3.—Scientific Forestry.

The practice of forestry in Canada has consisted chiefly in the administration of existing forest areas. What little reforestation or afforestation has been done has been largely of an experimental nature. During recent years investigatory or forest research work has assumed considerable importance. The object of this work is to secure an inventory of Canada's timber resources, to ascertain the best methods of

securing continuous production of desirable species by natural means, and the economic possibilities of establishing forests by artificial means. In addition to sylvicultural research, investigations are being carried on for the purpose of determining the best methods of forest utilization or the converting of standing timber into saleable commodities.

Technical foresters are employed by the Dominion and provincial Forest Services and by many pulp and lumber companies. In addition to administrative work, these men carry on forest reconnaissance and intensive forest surveys for the purpose of estimating and mapping standing timber and determining conditions affecting growth and reproduction of existing forests. They also direct experimental planting and experimental regulation of commercial logging operations. The Dominion Forest Service employs a special staff for forest investigatory work, and has established a forest experimental station at Petawawa, Ontario, and at numerous points throughout the Dominion. The work is done in co-operation with the provincial services and with pulp and lumber companies, and is also carried on on Dominion forest reserves. The Forest Products Laboratories, established by the Dominion Forestry Branch in connection with McGill University, at Montreal, and the University of British Columbia, at Vancouver, carry on investigatory work in forest products, covering the strength, durability and other mechanical, physical and chemical qualities of Canadian woods, methods of seasoning, preservation from decay and chemical utilization in the pulp and paper and wood-distillation industries. The province of Quebec is organizing a Bureau of Forest Research under the Provincial Forester, supported by a generous annual appropriation. Much credit is due to the forestry departments of some of the pulp companies in Canada for pioneering work in forest research.

Education in forestry and allied subjects and opportunities for research are offered by four Canadian universities and by other agencies. The University of Toronto, the University of New Brunswick at Fredericton, and the University of British Columbia, at Vancouver, provide four-year courses leading to a professional degree. The School of Forestry and Surveying in connection with Laval University at Quebec provides a combined course in the French language, of four years duration, leading to diplomas in both sciences. The Government of Quebec is establishing a school in papermaking at Three Rivers in the heart of the paper industry, several agricultural colleges provide short courses in farm forestry, and schools for forest rangers are established by some of the provincial Governments.

The practice of forestry by individuals and private concerns is encouraged by the furnishing of expert advice by Dominion and provincial Services and by the distribution of tree planting material. The Dominion Forest Service maintains two nurseries in Saskatchewan, one at Indian Head and the other at Sutherland, near Saskatoon. From five to six million trees are distributed annually to farmers and ranchers in the Prairie Provinces for planting woodlots and windbreaks. If certain conditions are fulfilled, the material and instructions are provided free except for transportation charges.

The province of Ontario provides material under similar conditions, and distributes about 250,000 trees annually from its nurseries near St. Williams in Nortolk county. To encourage the establishment of communal forests by towns and other municipalities, the provincial Government undertakes to plant free of charge any area purchased by the municipality for this purpose.

In Quebec, a forest nursery at Berthierville serves as a demonstration station for the School of Forestry and as a forest ranger school. It provides at present

about half a million trees for sale and distribution in the province annually, comprising seedlings and transplants for forest planting and larger trees for ornamental purposes. The capacity of the nursery is being raised to five million trees. Provision is made by legislation for the creation of communal forests.

6.—Forest Utilization.

The clearing of forest land was the primary step toward the settlement of eastern Canada by the early pioneers. The material so removed was at first more than sufficient for building purposes, fencing and fuel. In many cases logs and clearing *débris* were burned in order to get them out of the way. Later on, inroads were made into the forest surrounding the farms and settlements to supply these needs, and lumbering as a business developed gradually as the settlements extended, the demand increased and the supply receded. The industry, which started in the lower St. Lawrence valley and Maritime provinces, spread northward and westward during the period of rapid advance in settlement.

The Ottawa valley became the first important centre of commercial activity in the industry, with the rafting of square timber to Quebec for export. The Georgian Bay and Rainy River districts were later opened up, and although the industry is now established over the entire Dominion these districts are still the chief lumbering regions in eastern Canada. Lumbering to the north of the Prairie Provinces has progressed with the colonization of this region, but the production does not usually exceed the local demand. Exploitation of the extensive forests of British Columbia proceeded simultaneously with similar development in the Pacific States across the border, and is steadily increasing in relative importance. In 1908 this province contributed less than a fifth of Canada's total lumber production, while in 1921 this proportion was over a third, indicating that the centre of production is rapidly moving westward.

1.—Woods Operations.

Differences throughout Canada in soil, climate, topography, average size of trees, density of stands and numerous other local conditions, give rise to differences in logging methods not only between provinces but between adjacent logging units in the same district. Generally speaking, throughout eastern Canada the climate is such that the cutting and hauling of logs can be carried on most economically during the fall and winter months. The trees are felled and the logs hauled mostly on sleighs by horses to the nearest stream or lake, where they are piled on the ice or sloping banks. Logging railways are sometimes used, in some cases hauling the logs directly to the mills. Tractors are being substituted for horses in many operations. The nature of the topography, the presence of connected systems of lakes and streams, makes it possible in most cases to float the logs from the forest to the mill at a minimum cost during the annual spring freshets. The logging industry east of the Rocky mountains is therefore almost entirely seasonal. In many cases lumbermen co-operate in river driving operations. Improvement companies, financed by the logging operators, build dams, sluices and other river improvements to facilitate the passage of the floating logs, and tow the material across lakes and still stretches of river in booms or rafts. The logs, which carry the distinguishing stamp or brand of each operator, are finally sorted and delivered to their respective owners. In British Columbia the scarcity of drivable streams and the greater average size of the logs give rise to entirely different logging methods. Slides are built on suitable slopes to bring down timber from upper hillsides and benches, and logs are hauled and assembled by donkey engines and different cable systems. Logging railways

are used extensively to carry logs to the mills or to lakes, large rivers or tidewater where they can be assembled in booms or rafts and towed to the mills. These operations are more or less independent of frost, snow or freshet, and are carried on in most cases throughout the entire year.

In eastern Canada general logging operations are carried on by the mill owners or licensees of timber lands, often through the medium of contractors, sub-contractors and jobbers. In the better settled parts of the country a considerable quantity of lumber is sawn by custom saw-mills or small mills purchasing logs from the farmers. Unmanufactured pulpwood, poles, ties and other forest products have a market value, but saw-logs, as a rule being the property of the mill-owner, are not generally marketed as such in eastern Canada. In British Columbia logging is carried on more frequently as a separate enterprise by limit holders, who cut and sell logs on the market. In many cases mill operators are not limit holders, but buy their entire supply of raw material from logging concerns.

In connection with woods operations, it should be borne in mind that the forests not only provide the raw material for saw-mills and pulp mills, but in addition provide annually about 16,000,000 railway ties, 1,000,000 poles for telegraph, telephone and power lines, 14,000,000 fence posts, over 8,000,000 cords of firewood, together with piling, round mining timbers, square timber for export, wood for distillation, charcoal and excelsior manufacture, bark and wood for tanning extracts, maple syrup and sugar, and a number of minor products.

2.—The Lumber Industry.

The manufacture of lumber, lath, shingles and other products and by-products of the saw-mill, forms the principal industry in Canada depending on the forest for its raw materials. Annual statistics covering this and other forest industries were collected and published by the Forestry Branch of the Interior Department from 1908 to 1916. Since that date the work has been carried on by the Dominion Bureau of Statistics, in co-operation with the Forestry Branch.

Table 2 gives the production of lumber, lath and shingles from 1908 to 1921 inclusive. The greatest cut of lumber during this period was in 1911, when almost five billion feet board measure was produced. Although the quantity produced annually did not alter materially from 1908 to 1920, averaging approximately 4,000,000,000 feet, the average value rose from $16.27 per thousand feet in 1908 to $39.12 in 1920. A reduction in both quantity and average value was recorded for 1921.

2.—Lumber, Lath and Shingle Production in Canada, for the calendar years 1908 to 1921.

Years.	Lumber cut.		Shingles cut.		Lath cut.	
	Quantity M. ft. bd. measure.	Value.	Quantity	Value.	Quantity	Value.
		$	M.	$	M.	$
1908	3,347,126	54,338,036	1,499,396	3,101,996	671,562	1,487,125
1909	3,814,942	62,819,477	1,988,753	3,701,182	822,124	1,979,034
1910	4,451,652	70,609,233	1,976,640	3,557,211	851,953	1,943,544
1911	4,918,202	75,830,954	1,838,474	3,512,078	965,235	2,212,226
1912	4,389,723	69,475,784	1,578,343	3,175,319	899,016	2,064,622
1913	3,816,642	65,796,438	1,485,279	3,064,641	739,678	1,783,283
1914	3,946,254	60,363,369	1,843,554	3,688,746	625,010	1,585,484
1915	3,842,676	61,919,806	3,089,470	5,734,852	793,226	2,040,819
1916	3,490,550	58,365,349	2,897,562	5,962,933	665,588	1,743,940
1917	4,151,703	83,655,097	3,020,956	8,431,215	616,949	1,828,018
1918	3,886,631	103,700,620	2,662,521	8,184,448	438,100	1,369,616
1919	3,819,750	122,030,653	2,915,309	13,525,625	520,203	2,157,758
1920	4,298,804	168,171,987	2,855,706	14,695,159	762,031	5,248,879
1921	2,869,307	82,448,585	2,986,580	10,727,096	804,449	4,188,121

VARIATIONS IN PRODUCTION AND AVERAGE VALUE OF LUMBER.
1908 – 1921

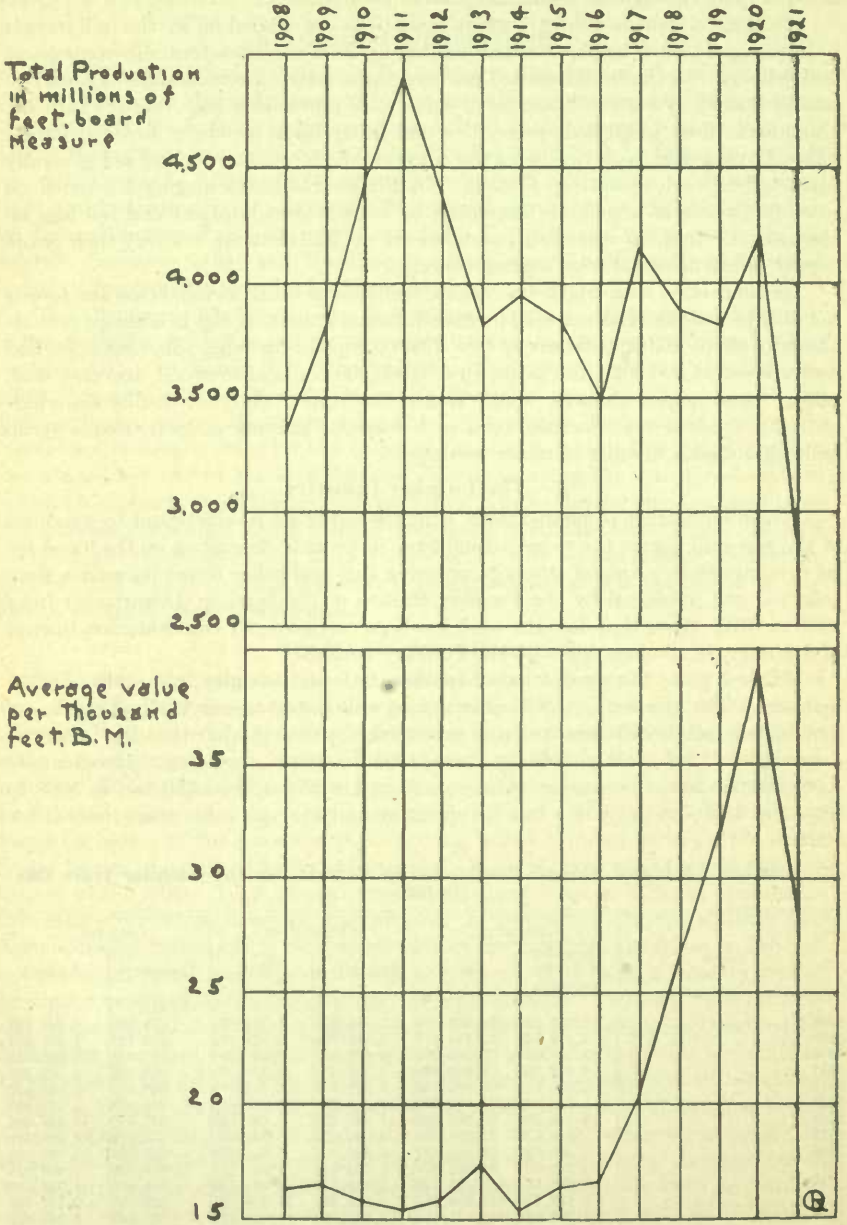


Table 3 shows the production during 1921 by kinds of wood and Table 4 gives the same information by provinces.

3.—Total Production of Lumber, Lath and Shingles in Canada, by Kinds of Wood, for the calendar year 1921.

Varieties.	Lumber.		Lath.		Shingles.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	M. ft. B.M.	$	M	$	M	$
Softwoods—						
Spruce	874,456	24,621,202	340,973	1,935,370	42,822	157,079
Douglas fir	680,845	16,613,882	84,730	636,950	–	–
White pine	480,214	17,228,634	199,051	864,013	8,274	30,413
Hemlock	232,169	6,114,436	48,352	209,345	3,719	12,031
Cedar	95,675	2,799,167	9,293	43,869	2,923,150	10,496,153
Red pine	85,530	2,515,507	9,426	47,815	–	–
Balsam fir	71,707	1,834,217	14,830	78,135	6,774	24,119
Jack pine	51,574	1,268,086	27,048	128,186	1,251	5,555
Yellow or bull pine	40,020	1,001,493	–	–	–	–
Tamarack	35,323	823,181	–	–	–	–
Total softwoods	**2,647,513**	**74,819,805**	**733,703**	**3,943,683**	**2,985,990**	**10,725,350**
Hardwoods—						
Yellow birch	68,897	2,355,503	–	–	–	–
Maple	47,962	1,771,742	–	–	–	–
Basswood	26,118	914,700	–	–	–	–
Elm	21,063	710,208	–	–	–	–
White birch	19,712	652,179	–	–	–	–
Poplar	10,679	332,548	10	60	393	1,231
Ash	8,723	310,583	–	–	–	–
Beech	8,445	243,559	–	–	–	–
Oak	3,058	149,909	–	–	–	–
Chestnut	371	18,588	–	–	–	–
Butternut	335	13,018	–	–	–	–
Cherry	216	8,794	–	–	–	–
Hickory	174	8,154	–	–	–	–
Walnut	23	1,765	–	–	–	–
Red alder	9	207	–	–	–	–
Total hardwoods	**215,785**	**7,491,457**	**10**	**60**	**393**	**1,231**
Unspecified	6,009	137,323	70,736	244,378	197	515
Grand Total	**2,869,307**	**82,448,585**	**804,449**	**4,188,121**	**2,986,580**	**10,727,096**

4.—Production of Lumber, Lath and Shingles in Canada, by Provinces, for the calendar year 1921.

Provinces.	Lumber.		Lath.		Shingles.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	M. ft. B.M.	$	M	$	M	$
Prince Edward Island	5,803	158,712	766	4,035	7,064	23,148
Nova Scotia	115,246	3,054,995	26,383	139,336	17,857	63,574
New Brunswick	269,983	7,810,622	179,383	1,081,172	183,246	658,347
Quebec	649,334	19,656,462	121,649	652,216	361,496	1,283,056
Ontario	734,054	24,518,164	353,337	1,503,474	40,389	171,642
Manitoba	61,727	1,398,067	14,876	73,297	34	102
Saskatchewan	10,892	273,093	1,995	12,111	–	–
Alberta	26,002	711,149	1,640	5,715	2,243	10,715
British Columbia	996,266	24,867,321	104,420	716,765	2,374,251	8,516,512
Total	**2,869,307**	**82,448,585**	**804,449**	**4,188,121**	**2,986,580**	**10,727,096**

The cut of lumber in Canada during 1921 was considerably less than it has been since 1908, when accurate annual statistics of the lumber industry were first collected. During 1921 only 2,869,307 thousand feet board measure of lumber, valued at

$82,448,585, was reported. This is a decrease in quantity of one-third from the production in 1920. The average value of lumber at the mill decreased by over $10 a thousand feet, causing a decrease in the total value of lumber sawn of $85,723,402 or over 50 p.c.

The number of mills reporting in 1921 was 3,126, a reduction of over 10 p.c. from 1920, and not only were there fewer mills in operation in 1921, but the average number of days each mill was in operation during the year was only 82½ as compared with 96 for 1920. This resulted in an average production per mill for the Dominion of only 918 thousand feet as against 1,235 thousand feet in 1920.

The total number of employees on salaries and wages in the saw-mills in 1921 was 30,337, as compared with 41,158 in 1920. The total payroll in 1921 was $26,707,689, a reduction of over 40 p.c. from 1920. The average rates of pay for all classes of employment in this industry were considerably less than in 1920. Other agencies of production in the saw-mills, such as fuel used, power employed and miscellaneous expenses incurred, all showed reductions from 1920 to 1921.

In spite of the reduced production of sawn lumber, this group of mills reported increases in the quantities of lath and shingles produced, amounting to over 5 p.c. in the case of lath and over 4 p.c. in the case of shingles. These increases in quantity were, however, accompanied by decreases in average value, causing decreases in the total values of lath and shingles produced. The figures for 1921 are: lath, 804,449 thousands, valued at $4,188,121, and shingles, 2,986,580 thousands, valued at $10,727,096. Other miscellaneous by-products of the saw-mills show a general increase in total value, especially in the cases of slack cooperage stock, sawn ties and mine timbers. Decreases were reported in connection with veneer, tight cooperage stock and dressed lumber.

The total value of all classes of products for 1921 was $116,896,559, as compared with $207,163,577 for 1920. A substantial increase in production and value, if not a return to average conditions in this industry, is indicated by returns already received for the calendar year 1922.

5.—Imports of Forest Products by Chief Classes, calendar years 1920 to 1922.

Classes.	Quantity.			Value.		
	1920.	1921.	1922.	1920.	1921.	1922.
				$	$	$
Lumber, rough sawn.....M Ft.	112,978	70,425	83,254	11,139,320	3,950,333	4,886,323
" dressed on one side "	52,697	46,273	59,245	3,347,955	1,678,839	2,034,626
" matched..... "	2,318	7,181	5,242	217,753	266,717	276,309
Total sawn lumber..... "	167,993	123,879	147,741	14,705,028	5,896,069	7,197,258
Lath.....M	8,355	7,167	962	80,258	51,274	6,421
Shingles..... "	8,328	4,433	10,065	30,570	20,415	36,309
Veneer.....$	–	–	–	1,040,375	343,365	297,550
Timber, hewn or sawn.....$	–	–	–	150,468	35,832	37,377
Railway ties.....No.	994,310	1,441,601	540,424	1,121,095	2,335,697	679,020
Logs.....$	–	–	–	496,740	465,622	258,136
Poles.....No.	115,957	30,544	1,892	268,620	73,805	7,011
Posts.....$	–	–	–	31,640	11,389	13,453
Fuel wood.....Cords	9,277	8,895	9,002	31,194	35,101	36,571
Miscellaneous wood.....$	–	–	–	1,564,604	354,912	290,796
Cork, canes, reed, etc.....$	–	–	–	84,898	255,373	286,356
Total Imports.....$	–	–	–	**19,605,490**	**9,878,854**	**9,146,258**

6.—Exports of Forest Products by Chief Classes, calendar years 1920 to 1922.

Classes.	Quantity.			Value.		
	1920.	1921.	1922.	1920.	1921.	1922.
				$	$	$
Sawn lumber.....M Ft.	1,924,952	1,024 227	1,993,551	83,330,477	37,159,008	58,063,896
Lath.....M	446,404	808,132	1,295,910	4,105,953	5,301,286	7,643,710
Shingles.....M	1,970,466	2,192,979	2,358,992	11,419,955	7,507,526	9,210,961
Timber squared.....M Ft.	42,950	55,103	55,140	1,899,444	1,699,530	1,492,344
Railway ties.....No.	1,887,244	1,853,296	965,288	2,116,411	2,248,185	684,247
Logs.....M Ft.	66,495	119,320	185,489	1,836,315	2,117,097	3,270,575
Poles.....No.	112,184	152,713	306,421	439,092	653,334	1,211,592
Posts.....$	–	–	–	209,292	36,933	64,020
Piling.....Lin. Ft.	1,818,483	1,399,486	1,365,538	250,284	163,907	119,290
Pulpwood.....Cords	1,247,404	1,092,553	1,011,332	15,778,171	14,617,610	10,359,762
Fuel wood..... "	29,880	1,824	11,570	117,224	81,686	70,168
Miscellaneous.....$	–	–	–	2,648,474	2,550,470	2,278,674
Total Exports.....$	–	–	–	**124,151,092**	**74,136,572**	**94,469,239**

These two tables show the imports and exports of the principal forest products for the calendar years 1920, 1921 and 1922.

The first timber shipped from Canada to Europe was during the French *régime* in 1667, and consisted mostly of square timber and masts and spars for the French navy. The export to England began to develop in the early part of the 19th century. Quebec was the centre of the square and waney timber trade, which reached its maximum in 1864, when as many as 1,350 sailing vessels entered that port and carried away over 20,000,000 cubic feet of timber, most of which was white or "Quebec" pine. The increase in the production of sawn lumber, the "deal trade," and the increasing scarcity of suitable material, resulted in a steady decline in the exports of square and waney timber, and Montreal became the centre of activity in exportation. The exports of square and waney timber have now fallen to about 4,000,000 cubic feet.

With the growing production of deals and other sawn lumber, the trade with the United States increased until in 1922 Canada exported almost 2,000,000,000 feet of sawn lumber to that country. The total value of exported sawn lumber and other unmanufactured or partially manufactured forest products in 1921 was over $94,000,000, of which about $76,000,000 worth went to the United States and $11,000,000 worth to the United Kingdom. The remaining export trade was widely distributed throughout both trans-Atlantic and trans-Pacific channels.

3.—The Pulp and Paper Industry.

The manufacture of pulp and paper is a comparatively recent development in Canadian industry. Paper was first manufactured in Cana'a about a hundred years ago, but prior to 1860 no wood pulp was used or produced. Rags, straw, esparto grass, cotton waste and other substances were the raw materials used. The first paper mill was established at St. Andrews in Quebec (then Lower Canada) in 1803 by a party of Americans who obtained concessions from the seigneurs. In 1825, at Crook's Hollow, was erected the first paper mill in what was then Upper Canada. Mr. Crooks, the founder, earned a bounty from the Government of £100 for the first sheet of paper made in the province.

What is claimed to be the first wood pulp mill in Canada was erected by Angus Logan and Company at Windsor Mills, Quebec, about 1870. The Riordons were among the first to manufacture groundwood pulp, and in 1887 Charles Riordon brought the sulphite process from Austria, and installed at Merritton a sulphite mill which is still in existence. In the census of 1871 no pulp mills are mentioned, but in

1881 five mills were in operation, with a total capital of $92,000, 68 employees and an output valued at $63,000. In 1891 there were 24, and in 1901, 25 mills. Since that date the advance in this industry has been still more rapid. At the present time there are in existence in Canada about 50 pulp mills, 35 combined pulp and paper mills and 40 mills making paper only, although not all of these are operating at present. This development is due chiefly to the existence in Canada of abundant water powers adjacent to extensive forest resources of pulpwood species. The importance of this combination is evident from the fact that energy to the extent of practically 100 h.p. is necessary for the production of one ton of paper.

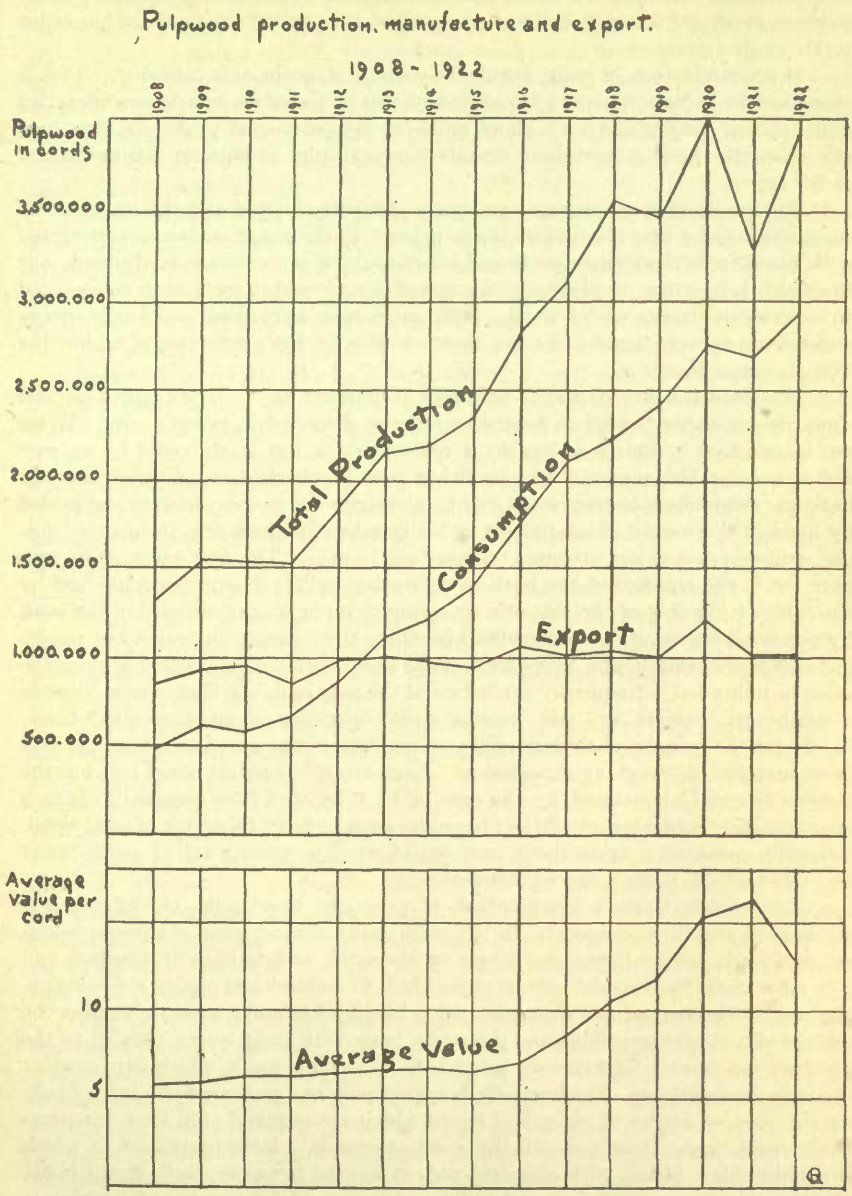
The industry in Canada includes three forms of industrial activity, the operations in the woods with pulpwood as a product, the manufacture of pulp and the manufacture of paper. These three stages cannot be treated as entirely distinct nor can they be separated from the different stages of the lumber industry. Some of the important pulp companies operate saw-mills to utilize the larger timber on their limits to the best advantage, and many lumber manufacturers divert a proportion of their spruce and balsam logs to pulp mills. As far as operations in the woods are concerned, it is often impossible to state whether the timber being cut will eventually be made into lumber or pulpwood.

On account of legislation already referred to, pulpwood cut on Crown lands in every province but Nova Scotia must be manufactured into pulp in Canadian pulp-mills. Pulpwood cut on lands held in fee simple may be exported, and a large proportion of it is sent to the United States. Raw or unmanufactured pulpwood has therefore a definite market value. Table 7 and Diagram 2 show the annual production of this commodity from 1908 to 1922, together with the quantities used by Canadian pulp mills and the quantities exported.

7.—Production, Consumption and Export of Pulpwood, calendar years 1908 to 1922.

Years.	Total Production of Pulpwood.			Used in Canadian Pulp-mills.		Exported Unmanufactured.	
	Quantity.	Total value.	Average value per cord.	Quantity.	Per cent of total production.	Quantity.	Per cent of total production.
	Cords.	$	$	Cords.		Cords.	
1908	1,325,085	7,732,055	5·84	482,777	36·4	842,308	63·6
1909	1,557,753	9,316,610	5·98	622,129	39·9	935,624	60·1
1910	1,541,628	9,795,196	6·35	598,487	38·8	943,141	61·2
1911	1,520,227	9,678,616	6·37	672,288	44·2	847,939	55·8
1912	1,846,910	11,911,415	6·46	866,042	46·8	980,868	53·2
1913	2,144,064	14,313,939	6·67	1,109,034	51·7	1,035,030	48·3
1914	2,196,884	14,770,358	6·72	1,224,376	55·7	972,508	44·3
1915	2,355,550	15,590,330	6·61	1,405,836	59·7	949,714	40·3
1916	2,833,119	19,971,127	7·05	1,764,912	62·3	1,068,207	33·7
1917	3,122,179	26,739,905	8·56	2,104,334	67·4	1,017,845	32·6
1918	3,560,280	37,886,259	10·64	2,210,744	62·1	1,349,536	37·9
1919	3,498,981	41,941,267	11·99	2,428,706	69·4	1,070,275	30·6
1920	4,024,826	61,183,060	15·22	2,777,422	69·0	1,247,404	31·0
1921	3,273,131	52,900,872	16·16	2,180,578	66·6	1,092,553	33·4
1922	3,923,940	50,735,361	12·93	2,912,608	74·2	1,011,332	25·8

Since 1902 the exports of raw pulpwood have gone exclusively to the United States, and have amounted annually to about 1,000,000 cords. The exportation of raw pulpwood, as shown in the accompanying diagram, has remained practically constant since 1912, while the quantity consumed in Canadian pulpmills has increased by over 236 p.c. during the same period. In 1908, almost two-thirds of the pulpwood


Pulpwood production, manufacture and export.
1908 - 1922
1908
1909
1910
1911
1912
1913
1914
1915
1916
1917
1918
1919
1920
1921
1922
Pulpwood in cords
3,500,000
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
Total Production
Consumption
Export
Average value per cord
10
5
Average Value

cut in Canada was exported in the raw or unmanufactured form. In 1922, with an increase of almost 300 p.c. in total production, the proportion exported has fallen to about one quarter.

The manufacture of pulp forms the second stage in this industry. This is carried on by mills producing pulp alone and also by paper manufacturers operating pulp mills in conjunction with paper mills for the purpose of providing their own raw material. Such mills usually manufacture a surplus of pulp for sale in Canada or for export.

The supply of rags for paper making is distinctly limited and the material too expensive for the manufacture of cheap paper. Early paper makers experimented with fibres from the stems, leaves and other parts of numerous annual plants, but the small proportion of paper-making material recoverable from such sources led to experiments in the use of wood. Different species were tried, and finally spruce and balsam fir were found to be the most suitable for the production of all but the best classes of paper.

The wood is delivered to the pulp mill in different ways. Logs eight feet and upwards are either floated in booms or rafts or delivered in railway cars. Wood cut in two foot or four foot lengths is seldom driven but is delivered by railway car or vessel. This material may be either peeled or barked or delivered with the bark on. Generally speaking, wood sold by farmers is cut to short lengths and peeled by hand in the woods. Material cut in log lengths must pass first through a "cut-up" mill where it is cut into two or four foot lengths. The next stage in its preparation is the removal of the bark in a "rossing mill." This is accomplished by the rubbing together of the logs in a revolving drum or by the removal of the bark by revolving knives. This last method produces the cleanest pulpwood but results in the loss of a considerable proportion of the wood itself. This preliminary preparation of pulpwood is frequently carried on at the pulp mill, but there are in Canada a number of "cutting up" and "rossing mills" operating on an independent basis, chiefly for the purpose of saving freight on material cut at a distance from the mill or on material intended for exportation. Logs are measured in board feet but the shorter material is measured by the cord (4′ by 4′ by 8′ of piled material), which is approximately equivalent to 500 feet board measure or to 90 cubic feet of solid wood. Generally speaking, it takes about one cord of wood to make a ton of groundwood and two cords to make a ton of chemical pulp.

There are in Canada four methods of preparing wood pulp, one of which is mechanical and three chemical. In the mechanical method green coniferous woods are preferred; spruce forms over 80 p.c. of the total, with balsam fir, hemlock and jack pine. Soft "hardwoods" such as paper birch, white birch and poplar, are occasionally used. The barked and cleaned wood is held by hydraulic pressure against the surface of a revolving grindstone, the sticks lying with their length parallel to the width of the stone. The stone is constantly washed by water, which carries away the pulp in suspension. Mechanically prepared pulp or "groundwood" is used only for the cheaper grades of paper and board which are required only for a comparatively short time. It contains all the wood substance, a large proportion of which is not durable. Mixed with chemical pulp it is used for news, wall, cheap book, manilla, tissue, wrapping, bag and building papers and for box boards, container boards and wall boards.

There are three methods of producing chemical fibre in use in Canada—the sulphite, sulphate (or kraft) and the soda processes, so called because of the chemicals used in each case to dissolve out the non-fibrous or non-cellulose components

of wood substance. Cellulose, which forms about 50 p.c. of wood substance, is the ideal paper-making material. It is a singularly inert substance, largely unaffected by ordinary chemical agents, atmospheric conditions, bacteria and fungi. High grade paper, being almost pure cellulose, will remain in perfect condition for centuries. Not only do the chemicals used separate out the cellulose, but they remove the fats and resins so troublesome in paper making, and break down the substance which holds the cellulose fibres together, so that they can be later felted together into a strong sheet of paper.

The sulphite process, which is the most important in use in Canada, depends on the action of a bisulphite liquor (a comparatively weak acid solution of calcium and magnesium bisulphite) on the non-cellulose wood components. This liquor is prepared by burning sulphur or pyrites and absorbing the resulting sulphur dioxide gas in a milk-of-lime solution or in water, in the presence of limestone.

The woods used in this process in Canada are all coniferous. Spruce forms 65 p.c., balsam 24 p.c., hemlock 10 p.c., together with small quantities of other conifers. The previously barked and cleaned pulpwood is chipped in a machine which reduces the wood to particles about an inch long and a quarter of an inch thick, or smaller. These chips are screened, crushed and fed into digesters—large steel tanks lined with acid-resisting brick—where they are cooked by steam in the presence of the bisulphite liquor referred to. The cooked chips are then "blown" into pits below the digesters and washed in preparation for screening. Sulphur and lime are the most important chemicals used in this process, and their recovery, or the economic utilization of waste sulphite liquor, is still largely an unsolved problem.

Sulphite fibre is used in the manufacture of newsprint paper, in which it forms about 20 p.c. of the pulp used, adding strength to the remaining 80 p.c. of groundwood pulp. It is used for the better classes of white paper and boards, either pure or in mixture with the other fibres.

The soda process is the oldest chemical process, and depends on the action of an alkaline solvent, caustic soda, on the non-fibrous components. This caustic soda is prepared from soda ash dissolved in water and boiled with lime or is produced electrolytically from brine. Most of the chemicals used in this process are recoverable. The wood of the softer so-called "hardwoods" or broad-leaved trees, such as poplar, basswood, willow, etc., is used almost exclusively in this process. The wood is prepared as in the other chemical processes, and the chips are cooked in unlined metal digesters. The resultant fibre is used in the manufacture of the best class of book, magazine and writing papers, as a filler mixed with stronger pulp. The result is a paper which lacks strength but can be readily finished to a good surface.

The manufacture of sulphate or kraft pulp is a comparatively recent modification of the soda process. It was first used in America by the Brompton Pulp and Paper Company at East Angus, Quebec, in 1907, and was treated as soda pulp in statistical reports up to 1912. The process was first introduced with the intention of reducing the manufacturing cost of soda pulp by substituting salt cake (sodium sulphate) for the more expensive soda ash (sodium carbonate). Subsequent developments showed that by an adaptation of this process the superior strength of coniferous wood fibre could be taken advantage of, and at the present time the woods used are almost exclusively coniferous. Spruce heads the list with about 65 p.c. of the total, followed by jack pine with about 20 p.c., hemlock with about 10 p.c., and other conifers in smaller proportions. The chipped wood is treated with the caustic solution in unlined steel digesters. The cooking process is carried on just long

enough to obtain fibres that can be easily separated. The fibres so obtained are long, flexible and very strong, and are used in the manufacture of so-called kraft papers used for wrapping, bags, etc.

The pulp or fibre from all four processes leaves the grinders or digester pits in a fluid state, consisting of water with a small proportion of fibre held in suspension. It is first screened and thickened, and may then be piped direct to the paper mill. For shipping or storing, it is usually dried out sufficiently to allow it to be formed into sheets and folded into bundles or "laps." For export, these "laps" are baled by hydraulic presses. In some cases the pulp is dried for export by converting it into what is practically a coarse form of paper. Groundwood pulp is sold in laps either wet or pressed. Sulphite pulp is marketed in laps, sheets or rolls, and soda pulp is usually shipped in rolls.

Table 8 shows the total production of pulp in Canada from 1908 to 1922 inclusive, together with the production of groundwood pulp and the production of fibre by the three chemical processes described. Statistics of values are not available from 1908 to 1916.

8.—Pulp Production, Mechanical and Chemical, calendar years 1908 to 1922.

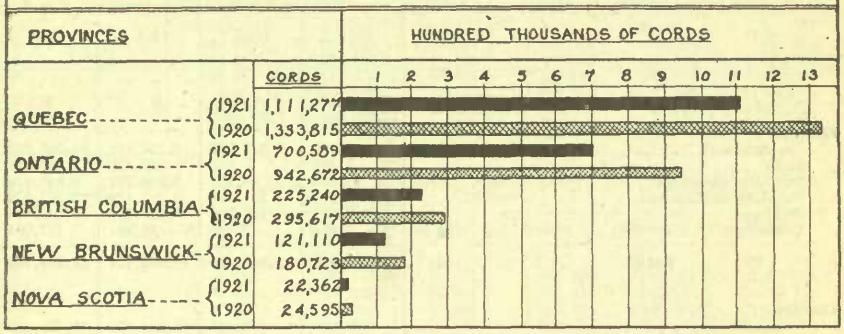
Years.	Total Production.[1]		Mechanical Pulp.		Chemical Fibre.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	$	Tons.	$	Tons.	$
1908	363,079	-	278,570	-	84,509	-
1909	445,408	-	325,609	-	119,799	-
1910	474,604	-	370,195	-	104,409	-
1911	496,833	-	362,321	-	134,512	-
1912	682,632	-	499,226	-	183,406	-
1913	854,624	-	600,216	-	254,408	-
1914	934,700	-	644,924	-	289,776	-
1915	1,074,805	-	743,776	-	331,029	-
1916	1,296,084	-	827,258	-	468,826	-
1917	1,464,308	65,515,335	923,731	25,918,811	540,423	38,374,191
1918	1,557,193	64,356,173	879,510	19,112,727	677,683	45,243,446
1919	1,716,089	73,320,278	990,902	23,316,828	725,187	50,003,450
1920	1,960,102	141,552,862	1,090,114	49,890,337	848,528	90,053,999
1921	1,549,082	78,338,278	931,560	32,313,848	612,467	45,929,513
1922	2,150,251	84,947,598	1,241,185	31,079,429	897,533	53,615,692

[1]These totals include some unspecified pulp and screenings.
NOTE.—No values available, 1908 to 1916.

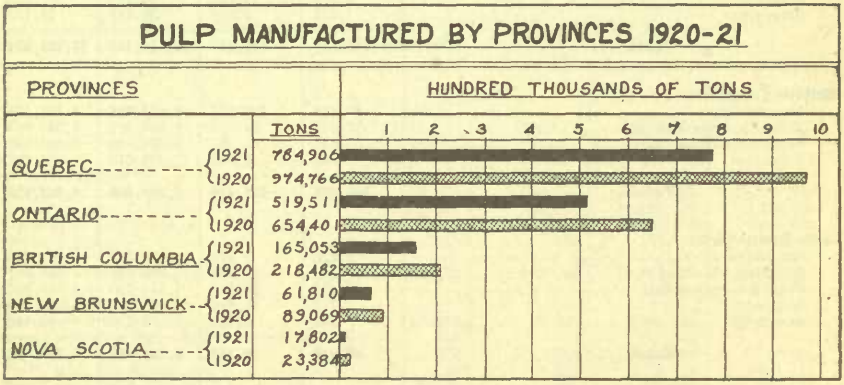
In Table 8 is shown the steady growth of this industry up to 1920, when 1,960,102 tons of pulp were produced. There was a drop in production in 1921, but the production of 1922 reached the highest point in the history of the industry.

Table 9 gives the production of pulp in Canada in 1921 and 1922 by processes and by provinces. During 1922 there were 43 mills manufacturing pulp only and 28 combined pulp and paper mills. These 71 establishments turned out 2,150,251 tons of pulp, valued at $84,947,598, as compared with 1,549,082 tons valued at $78,338,278 in 1921, representing an increase of 38.8 p.c. in quantity. Of the 1922 total for pulp, 1,188,581 tons, valued at $36,247,976, were made in the combined pulp and paper mills for their own use in manufacturing paper. The surplus, together with the product of the pulp mills, amounting to 961,670 tons, valued at $48,699,622, was sold in Canada or exported. As in the case of pulpwood, a part of the product of this stage of the industry provides raw material for the later stages, while the remainder has a definite market value as such.

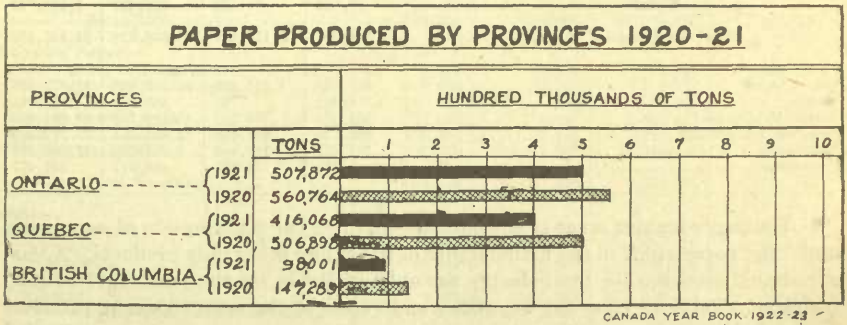
PULPWOOD CONSUMPTION BY PROVINCES 1920-21



PULP MANUFACTURED BY PROVINCES 1920-21



PAPER PRODUCED BY PROVINCES 1920-21



CANADA YEAR BOOK 1922-23

9.—Pulp Production by Classes and Provinces, calendar years 1921 and 1922.

Kinds of Pulp by Provinces.	Quantity.		Total Value.	
	1921.	1922.	1921.	1922.
	Tons of 2,000 lbs.	Tons of 2,000 lbs.	$	$
Quebec—				
Groundwood	482,176	612,597	17,718,437	15,284,012
Soda	3,479	793	300,825	57,815
Sulphite, bleached	63,051	44,257	5,604,731	3,880,472
Sulphite, unbleached	121,992	244,578	7,712,428	13,503,038
Sulphate	110,972	178,260	7,499,159	10,436,498
Screenings	3,236	7,720	58,844	167,905
Total	**784,906**	**1,088,205**	**38,894,424**	**43,329,740**
Ontario—				
Groundwood	337,014	483,664	11,930,972	12,655,780
Soda	722	–	82,584	–
Sulphite, bleached	45,367	30,458	3,994,028	2,505,462
Sulphite, unbleached	129,392	196,392	9,622,526	11,330,995
Sulphate	5,703	13,150	650,487	697,305
Screenings	1,313	2,644	33,543	74,132
Total	**519,511**	**726,308**	**26,314,140**	**27,263,674**
British Columbia—				
Groundwood	89,348	100,483	1,809,448	1,771,178
Sulphite, bleached	17,273	24,077	1,801,522	1,547,963
Sulphite, unbleached	51,544	63,997	3,126,950	2,999,699
Sulphate	6,888	9,869	471,073	663,285
Total	**165,053**	**198,426**	**7,208,963**	**6,982,125**
New Brunswick—				
Groundwood	5,220	6,879	178,542	201,712
Sulphite, bleached	29,113	47,898	3,080,877	3,758,007
Sulphite, unbleached	19,197	27,221	1,540,790	1,388,637
Sulphate	7,774	16,583	441,563	846,516
Screenings	506	1,169	2,530	10,440
Total	**61,810**	**99,750**	**5,244,302**	**6,205,312**
Nova Scotia—				
Groundwood	17,802	37,562	676,499	1,166,747
Total	**17,802**	**37,562**	**676,499**	**1,166,747**
Total for Canada	**1,549,082**	**2,159,251**	**78,338,278**	**84,947,598**
Groundwood	931,560	1,241,185	32,313,848	31,079,429
Soda	4,201	793	383,409	57,815
Sulphite, bleached	154,804	146,690	14,481,158	11,691,904
Sulphite, unbleached	322,125	532,188	22,002,694	29,222,369
Sulphate	131,337	217,862	9,062,252	12,643,604
Screenings	5,055	11,533	94,917	252,477

The paper making stage of the industry involves the consumption of wood pulp and other paper stock in the manufacture of paper and other pulp products. Accurate annual statistics for the industry are only available for the years 1917 to 1922 inclusive. Table **10** gives the quantities and values of the main classes of products in the industry from 1917 to 1922. These main classes are further subdivided into about thirty sub-classes, details concerning which are included in Table **11** for 1921 and 1922.

10.—Summary of Paper Production in Canada, calendar years 1917 to 1922.

Years.	Newsprint Paper.		Book and Writing Paper.		Wrapping Paper.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	$	Tons.	$	Tons.	$
1917	689,847	38,868,084	48,141	9,310,138	50,360	5,646,750
1918	734,783	46,230,814	48,150	10,732,807	61,180	7,341,372
1919	794,567	54,427,879	58,228	12,571,000	59,697	7,979,418
1920	875,696	80,865,271	73,196	21,868,807	77,292	12,161,303
1921	805,114	78,784,598	53,530	12,550,520	52,898	6,634,211
1922	1,081,364	75,971,327	64,808	12,560.504	81,793	8,219,841

Years.	Boards.		Other Specified Paper Products.		Total Paper.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	$	Tons.	$	Tons.	$
1917	54,080	3,543,164	11,261	1,382,205	853,689	58,750,341
1918	87,749	5,551,409	35,862	3,267,142	967,724	73,123,544
1919	137,678	8,892,046	40,065	3,882,500	1,090,235	87,752,843
1920	158,041	12,904,662	30,726	4,222,724	1,214,951	132,022,767
1921	89,120	6,225,948	18,285	2,358,658	1,018,947	106,553,935
1922	113,200	7,000,081	25,650	2,508,325	1,366,815	106,260,078

11.—Paper Production in Canada, by Classes, calendar years 1921 and 1922.

Classes.	Quantity.		Total value.	
	1921.	1922.	1921.	1922.
	Tons of 2,000 lbs.	Tons of 2,000 lbs.	$	$
Newsprint Paper—				
In rolls	662,839	1,056,995	65,309,772	74,068,178
In sheets	129,201	18,600	12,066,316	1,422,805
Hanging or wall paper	12,955	5,597	1,388,708	449,524
Poster paper	119	172	19,802	30,820
Total Newsprint	805,114	1,081,364	78,784,598	75,971,327
Book and Writing Paper—				
Book, wood fibre chief ingredient	23,730	31,626	4,494,791	5,044,605
Book, rags chief ingredient	154	–	32,340	–
Cover	219	160	59,166	41,070
Plate, map, lithograph, etc.	26	4,730	5,134	803,150
Cardboard, bristol board, etc.	1,644	1,906	311,103	326,355
Coated paper	6,904	7,940	1,785,998	1,702,433
Writing paper	17,893	15,543	5,256,499	4,141,539
All other fine paper	2,960	2,903	605,489	501,352
Total Book	53,530	64,808	12,550,520	12,560,504
Wrapping Paper—				
Manilla (rope, jute, tag, etc.)	2,505	3,300	574,198	480,864
Heavy wrapping (mill wrappers)	9,988	22,792	523,323	1,203,450
Straw wrapping	160	160	16,000	3,200
Bogus or wood manilla	12,959	9,027	1,320,143	1,072,556
Kraft	20,246	38,645	3,170,409	4,450,605
All other wrapping	7,040	7,869	980,138	1,009,166
Total Wrapping	52,898	81,793	6,634,211	8,219,841
Boards—				
Wood-pulp board	39,891	60,210	2,556,315	3,500,479
Strawboard	4,397	5,413	271,115	318,784
Chipboard	17,104	19,492	1,047,348	1,089,040
Newsboard	3,434	362	315,783	20,685
Testboard	6,058	5,587	527,333	306,193
Trunk, leather, binder's and pressboard	841	3,858	89,772	487,133
Wallboard	1,261	988	100,880	29,167
All other boards	16,134	17,290	1,317,402	1,248,600
Total Boards	89,120	113,200	6,225,948	7,000,081

11.—Paper Production in Canada, by Classes, calendar years 1921 and 1922—concluded.

Classes.	Quantity.		Total value.	
	1921.	1922.	1921.	1922.
	Tons of 2,000 lbs.	Tons of 2,000 lbs.	$	$
Other Paper—				
Tissue	1,018	2,327	319,653	504,036
Toilet	2,861	3,431	912,745	650,736
Blotting	–	–	–	–
Building, roofing and sheathing	14,406	19,892	1,126,260	1,353,553
Asbestos paper	–	–	–	–
Pure vegetable parchment	–	–	–	–
Miscellaneous paper	–	–	–	–
Total Other Paper	18,285	25,650	2,358,658	2,508,325
Total Specified Paper	**1,018,947**	**1,366,815**	**106,553,935**	**106,260,078**
Unspecified Products	–	–	335,857	825,688
Total All Products	–	–	**106,889,792**	**107,085,766**

During 1922 there were 28 combined pulp and paper mills and 33 mills making paper only. These 61 establishments produced 1,366,815 tons of paper, together with certain miscellaneous pulp products, with a total value of $107,085,766, an increase of 34.1 p.c. in quantity over 1921. Newsprint paper forms annually about 80 p.c. of the paper production in Canada. In 1922 this class of paper amounted to 1,081,364 tons, valued at $75,971,327, an increase of 34.4 p.c. over 1921.

While the manufacture of pulp and the manufacture of paper are properly two distinct industries, the existence of combined pulp and paper mills makes it impossible to separate many of their statistics. There were altogether 104 mills of all classes in operation in 1922, as compared with 100 in 1921. The total net value of production, which reached $236,420,176 in 1920, fell to $151,003,165 during the reconstruction period in 1921. The total of $155,785,388 for 1922 shows a tendency toward the normal progress of this industry.

The total number of employees on salaries and wages in 1922 was 25,830 and their total payroll $32,918,955. The capital invested in the industry increased from $379,812,751 in 1921 to $381,006,324 in 1922. The total cut of pulpwood in Canada in 1922 was 3,923,940 cords, valued at $50,735,361, and of this total, 74.2 p.c. was used in Canadian pulp mills, the remaining 25.8 p.c. or 1,011,332 cords, valued at $10,359,762, being exported unmanufactured to the United States. In 1921 the total cut was 3,273,131 cords, of which 67 p.c. was consumed in Canada and 33 p.c. exported. No pulpwood is imported into Canada.

The exports of pulp during the calendar year 1922 were 818,247 tons, valued at $41,037,849, as compared with 527,222 tons, valued at $33,133,675, for 1921. Imports of pulp during the same periods were 17,300 tons at $1,008,527 for 1922 and 17,354 tons at $1,683,041 for 1921. Exports of newsprint paper were 959,514 tons at $68,362,817 for 1922 and 709,241 tons at $69,786,317 for 1921. Details of the external trade in these commodities are given in Tables **12, 13, 14** and **15** for the calendar year 1922.

The United States market absorbs annually about four-fifths of Canada's pulp and paper shipments, and the remaining portion goes to the United Kingdom and widely distributed overseas markets. Two-thirds of the newsprint paper consumed in the United States is either of Canadian manufacture or is made from wood or wood pulp imported from Canada.

12.—Exports of Wood-Pulp, by Countries, calendar year 1922.

Kinds of pulp and countries to which exported.	Quantity.	Value.	Average value per ton.
	Tons.	$	$
Total wood-pulp exported	**818,247**	**41,037,849**	**50·15**
Mechanical pulp	314,770	9,400,083	29·86
Sulphite fibre, bleached	146,705	11,993,202	81·75
Sulphite fibre, unbleached	208,446	10,477,746	50·27
Sulphate (Kraft) fibre	148,336	9,166,818	61·80
To the United States	**610,314**	**33,083,301**	**54·21**
Mechanical pulp	188,810	5,536,518	29·32
Sulphite fibre, bleached	138,691	11,426,232	82·39
Sulphite fibre, unbleached	134,477	6,953,733	51·71
Sulphate (Kraft) fibre	148,336	9,166,818	61·80
To the United Kingdom	**137,241**	**4,942,600**	**36·02**
Mechanical pulp	93,974	3,000,492	31·93
Sulphite fibre, bleached	52	4,477	86·10
Sulphite fibre, unbleached	43,185	1,937,631	44·87
To France	**3,957**	**152,821**	**38·62**
Mechanical pulp	1,943	58,651	30·19
Sulphite fibre, unbleached	2,014	94,170	46·76
To Japan	**22,349**	**1,383,606**	**61·91**
Sulphite fibre, bleached	7,761	542,003	69·84
Sulphite fibre, unbleached	14,588	841,603	57·69
To other Countries	**44,426**	**1,475,521**	**33·21**
Mechanical pulp	30,043	804,422	26·78
Sulphite fibre, bleached	201	20,490	101·94
Sulphite fibre, unbleached	14,182	650,609	45·88

13.—Imports of Wood-Pulp, by Countries, calendar year 1922.

Kinds of pulp and countries from which imported.	Quantity.	Value.	Average value per ton.
	Tons.	$	$
Total wood-pulp imported[1]	17,300	1,008,527	58·30
From the United States	17,299	1,007,988	58·27
Sulphite fibre, bleached	184	14,593	79·31
Sulphite fibre, unbleached	15,390	863,319	56·10
Soda fibre	1,451	106,614	73·48
All other wood-pulp	274	23,462	85·63

[1]The total includes a small quantity of unspecified pulp, valued at $539, imported from the United Kingdom.

14.—Exports of Paper, by Principal Countries, calendar year 1922.

Description.	United States.		United Kingdom.		Australasia.		All Countries.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		$		$		$		$
Newsprint..... tons	887,831	62,860,142	13,821	981,308	45,423	3,471,880	959,514	68,362,817
Wrapping, Kraft..... "	2,181	226,447	6,902	1,121,955	4,640	656,059	18,280	2,740,049
Wrapping, n.o.p..... "	197	10,914	27	9,294	1	155	329	40,337
Waste paper..... "	14,453	289,410	–	–	–	–	14,530	291,192
Book paper..... "	3	364	56	9,786	1,501	210,115	1,584	225,710
Bond paper..... "	29	6,181	68	17,796	337	66,909	611	132,980
Hanging paper..... rolls	46,295	10,511	375,224	62,657	752,184	130,643	1,565,083	251,470
Roofing paper, value only	–	127,128	–	3,982	–	24,892	–	223,893
Bags..... "	–	9,040	–	8,225	–	3,396	–	75,432
Boards..... "	–	1,425,876	–	635,122	–	78,345	–	2,328,829
All other paper and paper goods "	–	34,319	–	36,757	–	21,118	–	153,184
Total paper and paper goods....	–	**65,000,332**	–	**2,886,882**	–	**4,663,512**	–	**74,825,893**

15.—Imports of Paper by Principal Countries, calendar year 1922.

Description.	All countries.		United States.		United Kingdom.		Other countries.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		$		$		$		$
Newsprint..... tons	3,329	499,603	2,740	406,545	571	90,527	18	2,531
Wrapping, Kraft..... "	363	51,178	257	39,171	41	4,588	65	7,419
Wrapping, n.o.p..... "	3,250	377,473	3,022	337,300	136	29,960	92	10,213
Book, coated..... "	76	24,650	54	18,776	15	4,169	7	1,705
Bond and ledger..... "	530	133,851	386	101,568	143	32,026	1	257
Hanging..... rolls	1,747,295	342,191	1,633,228	296,138	75,628	36,524	38,439	9,529
Roofing, value only.....	–	368,366	–	367,692	–	644	–	30
All other paper and paper goods, value only.....	–	6,497,782	–	5,491,897	–	621,540	–	384,345
Total paper and paper goods.....	–	**8,295,094**	–	**7,059,087**	–	**819,978**	–	**416,029**

4.—Other Wood-Using Industries.

Saw-mills and pulp mills are the two most important agents of secondary production among forest industries. They draw their supplies of raw material direct from the forest in the form of logs and pulpwood and produce sawn lumber, saw-mill by-products, pulp and paper. There are also a number of important industries which use these products as raw material for further manufacture. Some of them produce commodities made entirely of wood, others manufacture articles in which wood is the most important component, others produce articles in which wood is necessary but forms only a small proportion of the value. There are, in addition, a number of industries which use wood indirectly in the manufacture of articles which do not contain wood as a component part. The first group includes the manufacture of paper products; sash, doors and other millwork and planing mill products; boxes, baskets, cooperage and other containers; canoes, boats and small vessels; kitchen, baker's and dairy woodenware; wooden pumps, piping, tanks and silos; spools, handles, dowels and turnery. The second group includes the manufacture of furniture, vehicles and vehicle supplies, coffins and caskets, etc.

The third group where wood has a secondary importance includes the manufacture of agricultural implements, railway rolling stock, musical instruments, sporting goods, brooms and brushes, etc.

The fourth group could be said to include practically every form of industrial activity, as few, if any, of these are entirely independent of the use of wood directly or indirectly.

The first two groups, wherein wood, wood pulp or paper is the chief or only component, were represented in Canada in 1921 by 3,926 establishments in which $209,375,114 was invested. These industries employed 56,311 workers whose salaries and wages amounted to $70,183,081. They used raw materials valued at $89,337,260 in the manufacture of commodities valued at $219,222,379.

5.—Total Annual Forest Utilization.

Table **16** gives the values of certain classes of forest production of both primary and secondary nature. This table is repeated as in previous issues of the Year Book for comparison only. Table **17** gives the total value of primary and secondary forest production for 1920 and 1921. The first total includes primary production only, while the net figures include the value added by manufacturing logs and pulp-

wood into sawn lumber, pulp and other saw-mill and pulp mill products. The figures for 1920 include data from the decennial census covering materials cut on farms, which data are not collected annually. As the estimated increase in population from 1920 to 1921 was only about 2 p.c., it was assumed that this woodlot production would be practically unchanged and the same figures are therefore included in making up the 1921 totals.

16.—Summary Statistics of Forest Products, 1917 to 1921.

Items.	1917.	1918.	1919.	1920.	1921.
	$	$	$	$	$
Lumber, lath and shingles	93,914,330	113,254,684	137,714,036	188,116,025	97,363,802
Firewood	27,500,000	26,500,000	25,000,000	37,436,000	37,436,000 [1]
Pulpwood	26,739,905	37,886,259	41,941,267	61,183,060	52,900,872
Cross-ties	9,500,000	9,369,520	9,446,182	13,405,473	13,302,956
Square timber exported	1,325,192	1,402,871	1,933,216	1,899,444	1,699,530
Cooperage	1,703,977	1,496,205	1,392,365	812,758	905,810
Poles	600,000	613,000	–	655,467	655,467 [1]
Logs exported	824,155	510,202	1,506,058	1,836,315	2,117,097
Tanning materials	150,000	680,000	–	–	–
Round mining timber	195,000	211,292	–	–	–
Miscellaneous exports	–	–	–	41,188	15,346
Miscellaneous products	11,426,945	17,707,254	5,335,257	7,297,779	11,873,889 [1]
Total	**173,879,501**	**209,631,287**	**224,268,381**	**312,683,509**	**218,270,769** [1]

[1]Estimates, subject to revision.

17.—Total Values of Primary and Secondary Forest Production, 1920 and 1921.

Items.	1920.	1921.
	$	$
Firewood	37,436,000	37,436,000 [1]
Cross-ties	13,405,473	13,302,956
Poles	655,467	655,467 [1]
Posts	1,396,751	1,396,751 [1]
Rails	450,403	450,403 [1]
Square timber exported	1,899,444	1,699,530
Logs exported	1,836,315	2,117,097
Pulpwood exported	15,778,171	14,617,610
Miscellaneous primary products	2,134,219	2,134,219 [1]
Miscellaneous primary exports	41,188	15,346
Logs, etc. for saw-mills	91,527,134	46,513,623
Pulpwood used in pulp mills	45,404,889	38,283,262
Total Primary Products	**211,965,454**	**158,622,264**
Net Saw-mill Products [2]	100,718,055	59,648,505
Net Pulp mill Products [2]	96,147,973	40,055,016
Net Total	**408,831,482**	**258,325,785**

[1]Estimates, subject to revision.
[2]The gross totals, including the value of raw materials were,—saw-mills, 1920, $192,245,189; 1921, $106,162,128; pulp mills, 1920, $141,552,862; 1921, $78,338,278.

The quantity of material corresponding to the value of primary forest production is measured in a number of different units, all of which can be roughly converted into cubic feet. The total has been estimated at approximately 2,600,000,000 cubic feet per annum.

7.—Forest Depletion and Increment.

Fire Losses.—No accurate summing up of damage due to forest fires has ever been made for Canada, but it is quite certain that more than half of our original forest wealth has been destroyed by fire and that more timber has been so destroyed in recent years than has fallen to the axe.

The historic Miramichi fire, in 1825, burned along the valley of the Miramichi river in New Brunswick, and on a belt 80 miles long and 25 miles wide almost every living thing was killed. One hundred and sixty people perished, a thousand head of stock were killed, and a number of towns, including Newcastle, Chatham and Douglastown were destroyed. The damage to the forest was not even estimated. Damage to other property was placed at $300,000.

During more recent times, a series of disastrous fires swept over Northern Ontario. A number of isolated fires around the mining camp of Porcupine culminated on July 11, 1911, in a conflagration which resulted in the loss of 72 lives and property damage estimated at $3,000,000. In 1916, fires in the same general region were responsible for the lives of at least 224 people, the exact number never having been determined. During 1922, a third fire, covering in part the areas burned over by the previous fires, destroyed the town of Haileybury and other centres and caused 40 deaths. In 1908, a fire originating in the forest around Fernie, British Columbia, destroyed that city, caused 25 deaths, rendered 6,000 people homeless and damaged property to the estimated extent of $5,000,000. These are a few of the outstanding historical disasters. Every year thousands of acres are covered by fires of less individual importance but which in the aggregate are rapidly depleting our forest resources. During the last five years 723,250 acres of merchantable timber have been burned over annually. At the low estimate of 5,000 feet board measure per acre, the amount of timber destroyed annually would be 3,616,250,000 feet board measure. In addition there were over 800,000 acres of young growth and 500,000 acres of cut-over land burned over, on which the increment of perhaps 30 years, on the average, was destroyed.

Speaking generally, there are two annual periods in Canada when the forest fire hazard is highest; in the spring, after the disappearance of the snow, when the forest floor is dry and the green underbrush has not yet developed and again in the fall when the green growth is dead and the ground is covered with dry leaves. Statistics collected by the different government administrations and the Quebec Protective Associations show that over 95 p.c. of the fires of known origin are due to human carelessness and therefore preventable. Campers, settlers and railways are responsible for most of the fires whose origin is determined. Other causes, including lumbering operations and incendiarism, account for smaller proportions, and only a few are attributed to lightning.

Losses through Insects and Fungi.—During the last ten years the spruce budworm has caused tremendous damage to the spruce and balsam fir forests in eastern Canada. In Quebec, it is estimated that 100 million cords of pulpwood have been destroyed by this insect, and in New Brunswick the loss is placed at 15 million cords. Even though the active stage of the infestation is practically over, large amounts of timber continue to die every year as a result of previous defoliation. Other insects, though not as destructive as this one, entail a heavy drain on the forest. Though the attacks of fungi are more insidious, the loss caused by the various forms of rot and other fungous diseases is probably not less than that caused by insects under normal conditions. The butt rot in balsam fir is especially prevalent, and the value of the hardwoods also is greatly decreased on account of rot.

Poplar and white birch seldom reach over 10 inches in diameter without considerable decay, and, since these species form such a large proportion of the young growth, the loss, though it has never been computed, must be very great.

Summary of Losses and Increment.—The annual consumption of standing timber for use amounts to about 2,600,000,000 cubic feet. At a very low estimate, fires destroy annually about 800,000,000 cubic feet of merchantable timber and the young growth on 1,300,000 acres. During the last ten years, the destruction occasioned by the spruce bud-worm has averaged 1,345,000,000 cubic feet per annum, besides the injury from bark-beetles and other insects. The loss due to fungi and windfall is not known but is undoubtedly large. It may be safely estimated that the forests of Canada are being depleted at the rate of upwards of 5,500,000,000 cubic feet per annum. With about 475,000,000 acres of potential forest land, an average annual increment of 11.5 cubic feet per acre would cover this depletion, but in view of the destruction of young growth which occurs and the deterioration of the forests and of the soil, caused by repeated fires, there is little hope that this increment is being produced at the present time throughout Canada, although individual areas are producing greatly in excess of this quantity.

IV.—THE FUR TRADE.

Historical Sketch.—The place which the fur trade held during the French *régime* in Canada, when for a century and a half it was at once the mainspring of discovery and development and the curse of settled industry, is familiar history. Later, the Hudson's Bay Company may be said with truth to have held the West until the Dominion had grown to absorb it, bequeathing to the civilization which came after, a native race accustomed to the white man and an example of organization and discipline that was of lasting influence. The salient facts in the story are as follows:

From the earliest times the Basque and Breton fishermen upon the "banks" had traded for furs. As the French Court demanded more and more furs, adventurers came for the latter trade exclusively. Pont-Gravé and Chauvin built Tadoussac in 1599 as a centre for this trade with the Indians of the Saguenay, and when trade routes were discovered further inland, the founding of Quebec and Montreal followed. The French Government from the first granted monopolies of the fur trade, always on the condition that the company should bring to Canada a stated number of settlers. But settlement and the fur trade could never go together—settlement by driving fur-bearing animals farther afield made trading increasingly expensive, and the great profits of the fur trade, together with its freedom and romance, took all the adventurous from the rational pursuits of a settler. Trade spread west and south by the river routes, convoys bringing the furs yearly to Montreal and Quebec. The de Caen Company, in the seventeenth century, sent yearly to France from 15,000 to 20,000 pelts. "Beaver" was made the Canadian currency.

In the meantime, English navigators had been seeking a Northwest Passage to the Orient. By 1632 their efforts came to an end with little practical result. Hudson bay, however, had been accurately charted, so that when the first English fur-trading ships came some thirty years later, they sailed by charted routes to a safe harbour. The first expedition came at the instigation of Radisson and Groseilliers, two French *coureurs de bois* who had travelled in the rich fur country north of lake Superior. They had sought aid in France, but being repulsed turned to England. The charter of the "Adventurers of England trading into Hudson's Bay" was obtained in 1670 by Prince Rupert, who became first governor of the

company (whence the name Rupert's Land). In 1676, merchandise costing £650 was sent to the bay and the furs got by barter sold in England for £19,500. The dividend on the stock of £10,500 was sometimes as high as 100 per cent. During the struggle with the French, beginning about 1685, no return was made, but with the English victory, the company resumed payments, usually amounting to 20 per cent per annum. Forts were built on Hudson bay and James bay at the mouths of rivers; the company, as monopolist, waited for the furs to be brought to its posts.

With the Seven Years' War, the fur trade from the south passed out of the hands of the French, and until 1771 the English were busy rediscovering the old French routes to the West. A period of open competition followed. The discoverer of a new fur district was soon followed by competitors who undersold him and were undersold by him until some or all were ruined and left for new fields. "The goods were bartered away for a consideration below their values . . . . . the Indians were corrupted and the English character was brought into contempt." At length, the competitors would join their interests. Such a concern was the Northwest Company, founded in 1783-4, with a stock divided into 16 shares. No capital was deposited, but each party supplied a proportion of the articles needed for trade. The Northwest Company pursued a vigorous policy, founding posts to control all the best fur districts. The Hudson's Bay Company felt the keenness of the competition, and was forced to abandon its ancient policy of waiting for furs to be brought to the bay. By 1816, the rivals had absorbed or ruined eleven other partnerships, and were themselves on the verge of ruin. Finally, in 1821, the two were joined under the name of the older company. The Northwest Company brought with it the control of the Pacific and Arctic watersheds, to be added to the lands draining into Hudson bay, and over the whole region the Hudson's Bay Company secured legal recognition of its monopoly of the fur trade. There followed forty years of great prosperity. The company's rights of exclusive trading in Indian territory expired in 1859 and ten years later it surrendered its other privileges. In return, Canada granted £300,000 to the Company, as well as lands about its trading posts, and one-twentieth of the land in the fertile belt between the North Saskatchewan river and the United States boundary. The Hudson's Bay Company thereupon became a trading company, with no extraordinary privileges.

The Modern Industry.—Great changes have come over the trade in recent years. The railway has revolutionized conditions wherever its influence reaches. Steamboats now ply the larger lakes and rivers. Rising values have led to new processes of treatment and to the utilization of products once rejected. The muskrat has ousted the beaver from the *première place* (muskrat $4,707,043 in 1921-22; beaver $4,266,767). Competition has been encouraged, and new territory eagerly sought as in the days prior to 1821. The modern opposition, though it ranges throughout Canada, has centred at Edmonton, on the edge of the great preserve. Winnipeg is now the chief collecting and distributing point of the Hudson's Bay Company, though Moose Factory is visited once a year, as formerly, by a vessel from London. Montreal collects the furs of the Ottawa valley and the Quebec hinterland, and receives the bulk of the supplies.

During the Great War, the important market changed from London to the United States, as is shown in the figures for the war years. Of the $5,100,000 worth of undressed furs exported to England and the United States in 1914, England received $3,000,000; in 1919, out of $13,300,000 worth, only $3,700,000

went to England. At the close of the war, Montreal took a position as an international fur market, holding the first Canadian fur auction sales in 1920, when 949,565 pelts, valued at $5,057,114, were disposed of. Auction sales have also been held at Winnipeg and Edmonton. The Canadian fur market is now firmly established and sales are held two or three times a year.

Improved methods of capture, together with the advance of lumbering, mining and agricultural settlement, have driven fur-bearing animals farther and farther afield. Close seasons have been declared for Russian sable and Bolivian chinchilla and Canadian beaver, but even this has been insufficient, as is shown by a continued decrease of the numbers of the animals. The fur trade has taken other methods to supply the demand by renaming common and despised furs and by encouraging the use of the furs of domestic animals. About forty years ago, Persian lamb, astrachan and broadtail, the product of the Karakul sheep, came into general use. Several Karakul sheep farms are now established in Canada, the largest of which is situated in Alberta. Of fur-bearing wild animals in Canada, the fox has proved the most suited for domestication. The successful breeding of the fox on fur farms came in the period of rising prices after 1890 with the introduction of woven wire fencing. Other animals have been domesticated, though less successfully than the fox—raccoon, mink, marten, skunk, muskrat and beaver. For a review of the fur farming industry of Canada see pages 270 to 271.

Conservation.—The conservation of the wild life of Canada has been made a special object of government policy through the organization, in 1916, of the Advisory Board on Wild Life Protection, to co-ordinate the efforts of various departments and branches of the Dominion government in matters relating to the conservation of the wild life resources of Canada. The Northwest Game Act and the Migratory Birds Convention Act are the most important subjects to which the attention of the Board is specially directed and upon which it makes recommendations. In addition, the Board investigates and studies all problems relating to the protection and better utilization of all fur-bearing animals, "big game" mammals and to bird life whether game birds, insectivorous birds or other. The Board serves entirely without remuneration and in the seven years of its existence it has incurred no expenditure.

In all provinces and territories of the Dominion, regulations governing the taking of fur-bearing animals are in force, and most kinds are protected during certain seasons of the year. In cases where special protection is necessary to avoid extermination of the species, the killing of the animals is prohibited for a period of years. Licenses are required to trade or traffic in furs and monthly and annual returns are made by the traders to the provincial authorities. Some of the provinces also impose a royalty on furs and require that all pelts must be stamped by a game guardian or other provincial officer.

Commencing with 1881, records of the value of production of raw furs in Canada were obtained in the decennial censuses. In 1880, the value of pelts is shown to have been $987,555, and in 1910, to have been $1,927,550. In 1920, the Dominion Bureau of Statistics commenced the annual collection of returns from fur traders, and for the season 1919-20, the value of pelts purchased from trappers and fur farmers is shown to have been $21,387,005. This figure should not be taken as representative of the value of an average year's production, as abnormally high prices were paid for pelts during the early part of the season.

Present Production.—For 1920-21, the total fur production of Canada was valued at $10,151,594, and for 1921-22, at $17,438,867. For the calendar years

1920 and 1921, the value of the pelts sold from fur farms was $388,335 and $626,900[1]; in both years the large item in the production was silver fox, which, being more valuable as well as more tractable, is most successfully bred. Statistics of the number and value of pelts produced are given by provinces in Table 1 for the years 1920-21 and 1921-22, while the number and value of pelts in 1921-22, and the average value per pelt in 1920-21 and 1921-22, are given by kinds in Table 2.

1.—Numbers and Values of Pelts Purchased by Traders from Trappers and Fur Farmers, years ended June 30, 1921 and 1922.

Provinces.	Number of Pelts.		Value of Pelts.	
	1920-21.	1921-22.	1920-21.	1921-22.
			$	$
Prince Edward Island	5,678	7,167	256,137	448,786
Nova Scotia	53,051	52,472	112,948	188,887
New Brunswick	32,858	52,214	72,500	162,421
Quebec	374,167	402,799	2,061,853	3,326,626
Ontario	739,113	1,101,556	3,048,815	4,959,492
Manitoba	505,177	643,299	1,055,865	1,690,278
Saskatchewan	341,839	798,066	717,149	1,679,812
Alberta	539,832	682,266	1,087,164	1,377,139
British Columbia	120,499	283,867	507,134	1,568,009
Yukon	16,125	69,796	78,189	203,402
Northwest Territories	208,068	273,288	1,153,840	1,834,015
Total for Canada	**2,936,407**	**4,366,790**	**10,151,594**	**17,438,867**

2.—Kind, Number, Total Value and Average Value of Pelts of Fur-bearing Animals taken in Canada, year ended June 30, 1922, with comparative average values for the year ended June 30, 1921.

Kind.	Number of pelts.	Total value of pelts.	Average value per pelt 1921-22.	Average value per pelt 1920-21.
		$	$ cts.	$
Badger	1,777	1,844	1 04	0 96
Bear, black	8,432	90,171	10 81	12 62
Bear, brown	738	6,769	9 17	9 79
Bear, grizzly	115	1,882	16 36	22 16
Bear, white	378	6,918	18 30	24 62
Bear, unspecified	341	4,092	12 00	–
Beaver	232,134	4,266,767	18 38	16 31
Coyote	30,551	277,338	9 07	6 40
Ermine (weasel)	450,372	248,469	0 52	0 49
Fisher or pekan	5,689	424,688	74 45	58 86
Fox, cross	5,759	289,651	50 30	51 09
Fox, red	38,024	473,978	12 46	11 61
Fox, silver	4,979	734,002	147 42	151 99
Fox, blue	155	10,978	70 82	76 75
Fox, white	40,927	1,625,017	39 70	34 62
Fox, other	214	1,311	6 12	4 22
Lynx	11,673	237,925	20 38	23 09
Marten or sable	58,989	1,216,229	20 62	22 87
Mink	205,324	1,848,856	9 00	8 23
Muskrat	3,060,526	4,707,043	1 54	1 24
Otter	13,689	373,153	27 26	24 02
Rabbit	1,334	200	0 15	0 22
Raccoon	35,229	129,742	3 71	3 05
Skunk	133,342	312,130	2 35	1 73
Squirrel, black	15	19	1 27	1 00
Squirrel, grey	64	11	0 17	–
Squirrel, red	79	6	0 07	0 06
Wild cat	3,583	14,922	4 16	3 82
Wolf	9,451	96,146	10 17	9 50
Wolverine or carcajou	1,143	20,059	17 54	13 90
Caribou	4	8	2 00	7 10
Deer	9,363	12,947	1 38	1 51
Elk	8	20	2 50	2 56
Moose	1,838	5,249	2 85	3 88
Panther	40	195	4 87	5 23
Civet cat	111	32	0 28	0 22
House cat	400	100	0 25	0 26
Total for Canada	**4,366,790**	**17,438,867**	–	–

[1] For details of production of fur farms in Canada, see subsection under that heading in the section on Agricultural Production.

Exports.—Though the bison is nearly gone and the beaver and the marten are slowly following, the fur trade of Canada is in no immediate danger of extinction. A century ago, the value of the export trade in furs exceeded that of any other product. This has been greatly changed, yet the total output is not declining, and Canada may still be described as the last great fur preserve of the world. In 1667, exports of furs to France and the West Indies were valued at 550,000 francs. In 1850, the first year for which trade tables of the Customs Department are available, the value of raw furs exported was £19,395; in 1920, the value was $20,617,291, and in 1921, $11,711,981. Furs, dressed and undressed, to the value of $14,836,350, were exported in the fiscal year 1922, the British market absorbing $4,266,688 worth and the United States most of the rest. Canadian manufactures of furs and the home consumption are annually increasing with the growth of wealth and population. The area which will continue to furnish the historic peltries when settlement has planted its furthest outpost will still have to be reckoned by the hundreds of thousands of square miles.

V.—FISHERIES.

1.—The Early Fisheries.

Fishing is one of the earliest and most historic industries of Canada. From a date which precedes authentic record, the Normans, the Bretons and the Basques were on the cod-banks of Newfoundland. Cabot, in 1498, when he first sighted the mainland of North America, gave it the name of "Bacalaos," the Basque word for codfish, which he found already in use among those hardy seamen. Cape Breton, one of the oldest place-names in America, is another memorial of the early French fishermen,—and the Spaniards and the Portuguese were but little behind. Fernandez de Navarrete mentions all three as frequenters of the "Grand Bank" before 1502. The fishing was by hand lines over barrels made fast to the bulwarks to prevent fouling, the vessels remaining during fine weather, then returning to France with from 30,000 to 50,000 cod. Voyages along the coast soon showed the cod as plentiful inshore as on the outer banks, and it became common for a crew to anchor in a bay, erect a hut on shore, and make daily excursions to the fishing grounds—the product being salted and dried on land and at the end of the season shipped to France. Jacques Cartier, when he went up the St. Lawrence in 1534, found traces everywhere of these early "Captains Courageous" and of their rivalries in arms no less than in the capture of the teeming product which had tempted them so far from home. An establishment of the kind just mentioned was founded at Tadoussac by Chauvin in 1599. Soon the fishermen began to stay all winter and thus to erect permanent fishing settlements. Fishing, therefore, may well be regarded as the first industry to be systematically prosecuted by Europeans in what is today the Canadian domain. It has never since ceased to yield a perennial harvest both to Europe and America.

By the Treaty of Utrecht in 1713, Britain became the owner of Newfoundland and excluded France from fishing and drying fish on certain sections of the coast, but France retained the fisheries of Cape Breton and the gulf. The Seven Years war (1756-1763) put a stop to continuous fishing. At its close, the Robin family of Jersey came to Canada, and gradually acquired the former French fishing stations. Until the arrival of the Loyalists, all other fishing but cod was neglected. Inshore fisheries alone (including those of the Labrador coast) were developed during this phase; no deep-sea fishing vessel put out from Lunenburg, now the chief centre of the deep-sea fishery, until 1873.

2.—The Canadian Fishing Grounds.

The fishing grounds of the Dominion of Canada are perhaps the most extensive in the world. On the Atlantic, from Grand Manan to Labrador, the coast line, not including the lesser bays and indentations, measures over 5,000 miles. The bay of Fundy, 8,000 square miles in extent, the gulf of St. Lawrence, fully ten times that size, and other ocean waters comprise not less than 200,000 square miles, or over four-fifths of the area of the fishing grounds of the North Atlantic. In addition there are on the Atlantic sea-board 15,000 square miles of in-shore waters controlled entirely by the Dominion. Large as are these areas, they represent only a part of the fishing grounds of Canada. Hudson bay, with a shore 6,000 miles in length, is greater in area than the Mediterranean sea; the Pacific coast of the Dominion measures 7,180 miles in length and is exceptionally well sheltered; whilst throughout the interior is a series of lakes which together contain more than half of the fresh water on the planet, Canada's share of the Great Lakes alone amounting to over 34,000 square miles, a total which of course does not include lake Winnipeg (9,457 square miles), lake Manitoba, and others of even greater area.

Still more important than the extent of the Canadian fishing grounds is the quality of their product. It is an axiom among authorities that food fishes improve in proportion to the purity and coldness of the waters in which they are taken. Judged by this standard, the Canadian cod, halibut, herring, mackerel, whitefish and salmon are the peer of any in the world. It is possible, therefore, to state that by far the most valuable fisheries of the western hemisphere, if not of the globe, belong to Canada.

It will be seen from the above that it is impossible to deal with the Canadian fisheries in the aggregate; they are those of a continent rather than of a country, and are of corresponding diversity. Omitting the tremendous Hudson bay and peri-Arctic region, which extends from Ungava to Alaska and which is known to contain a number of valuable food fisheries in addition to its whaling grounds, there are roughly the following divisions of the Canadian fisheries:

Atlantic Fisheries.—These were the first Canadian fisheries in point of time and until 1918 they remained the most important for aggregate value of product. Cod, halibut, haddock, hake, herring, mackerel, lobster, oyster, seal and white whale fisheries are included. The estuarian and inland waters of the Maritime provinces and of Quebec are sometimes considered as distinct; if they are added, the list of products would embrace the salmon, the shad, the gaspereau (alewife), the smelt, the striped bass, the tom cod, the trout and the maskinonge. Conditions are fairly uniform throughout these fisheries, which are commonly divided into the inshore and deep-sea fisheries. Of the former (which employs seven-eighths of the fishermen) those from one to five miles out are frequented by boats, usually motor driven, carrying from two to four men each, and those twelve to fifteen miles out by larger vessels carrying from four to seven men. The fish are largely taken with gill nets, hand lines and trawls. Haddock, as well as cod, is a staple product; during the spring and summer it is split and salted, but the important season comes with the autumn, when the fish are shipped fresh or else smoked and sold as finnan haddie. The deep-sea fisheries are worked by vessels of from forty to one hundred tons, carrying from twelve to twenty men, operating with trawls from dories. Lunenburg, Nova Scotia, is the leading centre for the "bankers," with the Shelburne district second. Twice a year the fleets set sail for the Grand Banks of Newfoundland, touching the Canso Bank and other well known grounds as they go

and return. The vessels, built by native hands, remain at sea sometimes for months at a time, and, in the hands of sailors who have no superior, seldom come to grief. When they return, the fish are taken on shore, salted and dried by the men who caught them, and reshipped to large dealers at Halifax. The West Indies are the chief markets for this product; no cod fish in the world stands the tropical climate like that cured by Nova Scotia fishermen.

Lobstering is another distinctive industry. In 1871, there was only one lobster cannery in New Brunswick, and one in Prince Edward Island; today the canneries number over 500 and give work to over 6,000 people; 60,000,000 lobsters is a normal catch. The difficulty of enforcing regulations as to the capture of undersized and spawning lobsters offers a constant problem in connection with the output, but a decline is now thought to have been arrested. Oysters, once plentiful everywhere, are now found in somewhat diminished quantities. The canning of sardines, which are young herrings and not a distinct type of fish, in New Brunswick is second only to lobstering.

The fishing population of the Maritime provinces is a specialized and stable industrial class. The coast-wise fisheries are operated from April to November, except in sheltered districts; and though the larger vessels work all winter, several thousand men are available for a time each year for other employment. This they find about the small plots of land which the most of them own or occupy, in the lumber camps of New Brunswick, or in the collieries of Nova Scotia. A few from Lunenburg and other centres engage in the West Indian trade. Apart from restrictions of weather and close seasons, the prevailing method of paying the men on shares has a further tendency in years of low catches or prices to drive them into secondary occupations.

In view of the various disabilities attaching to the industry, an Act of the provincial legislature of Nova Scotia was passed in 1905, which provided for the organization of fishermen's unions or "stations" throughout the province, in affiliation with a central body, to meet annually for the discussion of common problems such as transportation facilities, the cordage supply, prices, methods of catching and curing fish, etc. Several successful conventions have been held. In New Brunswick similar legislation has been enacted. The larger interests, it may be added, look to a future in which the present scattered hamlets of fisher-folk will be swept into a few large communities, centralizing their energies, as in England and Scotland, at ports where facilities for landing the fish are greatest and market accommodation most extensive.

Inland Fisheries.—The Great Lakes and tributary waters of the St. Lawrence are a second great division of the Canadian fisheries. Whitefish, trout, pickerel, and lake herring are the most important commercial fishes of Ontario, though pike, sturgeon and coarse fish yield a fair return. The Quebec inland fisheries are comparatively unimportant. The story of the Great Lakes fisheries is one of reckless early depletion and subsequent slow recovery from restocking. Single hauls of 90,000 whitefish were once common; in the Detroit river the fish used to be driven into pens where they were captured or died by the hundreds of thousands, and were used later as fertilizer. All this reaped its reward in barren waters and a demoralized market. The season on the Great Lakes lasts from six to eight months, and though fishing through the ice is followed by many, a large number depend on miscellaneous employment between the seasons. Moving westward, lake Winnipeg, lake Winnipegosis, lake Manitoba and the smaller lakes to the north and east furnish most of the fish products of Manitoba. Whitefish

and pickerel are the chief products, but pike, tullibee, goldeye and many other varieties abound. In Saskatchewan and Alberta, commercial fishing is confined to the regions north of the Saskatchewan river, where whitefish in large quantities are taken. The problem of transportation is keenly felt; some of the greatest lakes of the continent,—Reindeer, Athabaska, Great Slave, Great Bear—and hundreds of smaller bodies of water are still beyond reach from a marketing point of view. The lakes of the west, however, repeating the part which the St. Lawrence played in the days of the French *régime*, and the cod banks in the history of New England, have assisted greatly in the settlement of the country by providing a much needed food supply for early arrivals.

Pacific Fisheries.—In British Columbia, there is an interior fishing region which corresponds in the main to the prairie section; in the early history of the province it is doubtful if the fur trade (which opened the door by way of the Rocky Mountains to later enterprise) could have established its footing but for these fisheries. The great wealth of British Columbia, however, in this respect,—the source from which she produces approximately two-fifths of the fish products of Canada, and has built up a trade which reaches to the ends of the earth—is the estuarian salmon fisheries of the Fraser, the Skeena, the Nass and other rivers of the Pacific slope. Every species of this king of food fishes known to the waters of the Pacific (which, however, is not the true salmon) is to be found in the British Columbia coast waters—the sockeye, the spring, the cohoe, the pink and the chum salmon. Of these the sockeye is by far the most important, owing to its abundance and to its prevailing deep red colour and excellent texture, which have created so keen a demand for it in the British market. On the Fraser river, which used to be the chief source of supply, but which has now yielded place to the Skeena and northern waters, the yield varies from year to year, being greatest, as a rule, every fourth year. The run begins late in July and is at its height in the opening weeks of August, though the northern rivers have a somewhat earlier season. The spring or quinnat salmon is a much larger fish; it was the species first used in the United States for canning. The run begins early in the spring and continues until July. The cohoes are smaller, running like the sockeye in compact schools during September and October on the Fraser and earlier on the northern streams. The chum salmon is salted for export to the Orient. The pink salmon again follows the sockeye. Many of the employees in this fishery are Chinese, Japanese and Indians (of 7,552 B.C. licenses last year, 2,926 were issued to Orientals), the Chinese preponderating in the canneries and the Indians and Japanese in the fishing operations.

Until recent years the other coastal fisheries of British Columbia were only slightly developed. Halibut abounds off Vancouver island and between the Queen Charlotte islands and the mainland, and though the first endeavor to establish an industry was unsuccessful, by 1903 British Columbia supplied 10,000,000 pounds of the 25,000,000 taken on the whole Pacific coast north of California. The former figure has since trebled. Similarly, the herring industry remained undeveloped until recently. There is also the whale fishery which has been organized in recent year with four stations, two on Vancouver island and two on the Queen Charlotte islands. In 1922 only one on Vancouver island and one on the Queen Charlotte islands were operated. The yearly catch of about 500 (187 in 1922) includes whales of many kinds—sulphur bottom, finback, and humpback with an occasional sperm whale. Whale hunting is carried on in fast boats with Svend Foyn harpoon guns—a method which was introduced from Norway. Every scrap of the whale is used—

oil, whalebone and guano are its products, and to an increasing extent "salted beef." Black cod, oulachon, smelts, pilchards, sturgeon, shad, sea-cucumber and bass are also abundant in British Columbia waters.

A word might be added with regard to the Canadian seal fisheries of the Pacific whose historic headquarters were the city of Victoria. The industry has disappeared, in part through the scarcity of the animals, and in part through the workings of the Pelagic sealing treaty of 1911. The hair-seal fleets of the north Atlantic make St. John's, Newfoundland, their headquarters; a few Canadian vessels, however, clearing from Halifax, N.S., take fur seals off the Falkland islands.

Game Fish.—The above is a purely industrial and commercial survey. Fishing for sport, however, has its economic side in a country of such famous game fish as the salmon of the Restigouche, the black bass of the Quebec and Ontario highlands, and the trout of the Nipigon. A considerable public revenue is derived from the leasing of waters in sparsely settled districts to clubs and individuals for sporting purposes. Several hundreds of guides find employment here during the summer months.

3.—The Government and the Fisheries.

Upon the organization of the Government at Confederation, the administration of the Canadian fisheries and marine was placed in the charge of a Department of the Dominion government which then exercised complete jurisdiction over the fisheries, under the supervision of a Cabinet Minister, with a large staff of inspectors, overseers and guardians to enforce the fishery laws. The annual expenditure of the Dominion on the fisheries is now $1,343,136 and its revenue about $224,156. In 1882, 1898, 1913 and 1920, decisions in the courts considerably altered the status of jurisdiction as between the Dominion and the provinces. To-day the Dominion controls the tidal fisheries of the Maritime provinces and British Columbia and the fisheries of the three Prairie provinces, together with the right of legislation for all fisheries. The non-tidal fisheries of the Maritime provinces and Ontario and both the tidal and non-tidal fisheries of Quebec are controlled by the respective provinces.

Conservation.—River and lake fisheries certainly, and sea fisheries probably, if left to themselves, conform to the economic law of diminishing returns. The Canadian Government, accordingly, has had for a main object the prevention of depletion, the enforcement of close seasons, the forbidding of obstructions and pollutions, and the regulation of nets, gear and of fishing operations generally. In addition, an extensive system of fish culture has been organized, the Dominion at present operating 46 hatcheries at a yearly cost of about $362,000, and producing 1,300,000,000 fry per annum, mostly B.C. salmon and whitefish. The young fish are distributed gratis if the waters applied for are suitable.

Scientific Research.—Stations under the direction of the Biological Board of Canada for the conduct of biological research into the numerous complex problems furnished by the fisheries are established at St. Andrews, N.B., and Nanaimo, B.C. Toronto, McGill, Queen's, Manitoba, British Columbia and the chief Maritime province universities send workers to both stations, chiefly professors and trained specialists. The life-histories of edible fishes, the bacteriology of fresh and cured fish, improved method of handling and preparing fish, and numerous other practical problems have been taken up and scientific memoirs and reports issued.

Direct Assistance.—For the rest, the action of the government has been in the way of rendering direct assistance in specific cases of difficulty. The inadequacy of the bait supply in the Maritime provinces has been met by the establishment of bait freezers. Experimental reduction plants were operated for some years to encourage the capture of dog-fish. For several successive years, also, an expert was engaged to conduct a series of demonstrations in the Scottish method of curing herring, with a view to improving the Canadian cured product. A scheme for the bettering of the Canadian method of drying cod and haddock has also been authorized. A quarterly bulletin on the sea fisheries is issued for the benefit of the trade. Finally, a fleet of armed cruisers patrol the coastal and inland waters for the prevention of poaching and the enforcement of regulations. An intelligence bureau in connection with this service consists of nearly a hundred stations, from which the movements of fish, supply of bait, etc., are announced daily to the fishermen.

During the war it became desirable to increase as far as possible the consumption of fish, reserving the less perishable animal foods for export to our allies. The government therefore, undertook to provide for the rapid transit of sea fish on its railway lines to the markets of the inland provinces, and to stimulate by a publicity campaign the consumption of fish. Though much was accomplished in this direction, the annual per capita consumption of fish in Canada is now estimated by the Fisheries branch at not more than 20 pounds, a low figure considering Canada's position as a fish producing country. The branch has done much to improve the fast freight service for fish products from the Atlantic coast to Montreal and Toronto.

International Problems.—So rich a fishing area as the north Atlantic could not fail to attract other countries, and old customs became elevated into rights, some of which have lasted until the present. The French shore is a Newfoundland question, now a sentimental one entirely. Very different is the question of the rights of the United States, whose fishermen, in the colonial period, provided the chief food supply for New England and who were granted by the Treaty of Independence a specific right to a share of the Canadian inshore fisheries. Losing this privilege by the war of 1812, the United States, after 1818, surrendered all but their right to call at Canadian ports for shelter, wood or water. In the years 1854-1866, the Reciprocity Treaty restored to Americans the right to use Canadian ports on the same terms as native fishermen. In 1871 again, the Treaty of Washington abolished the American duty on Canadian salt-water fish as an equivalent for the free access of American vessels to Canadian fishing grounds, adding, under the Halifax arbitration award of November 23, 1877, a payment of $4,500,000 by the United States to Canada. In 1885, however, the United States terminated the fisheries article of this Treaty, and a period of acute disagreement between the countries followed. A settlement was negotiated in 1888 but was rejected by the United States senate. Later a *modus vivendi* was agreed upon, which, having been subsequently renewed from time to time, still constitutes the fisheries arrangement between the countries. It permits American fishing vessels, on payment of an annual license fee of $1.00 per ton, to fish around the Magdalen islands and on the north shore of the gulf of St. Lawrence from Point Joli eastward, to enter all bays and harbours on the Canadian coast, to purchase bait supplies or outfit, to transfer catches and to ship crews. They are forbidden, however, to fish or prepare to fish in territorial waters.

On the Great Lakes, also, the more important fishery problems, such as restocking and marketing, are necessarily international in character, and are complicated

by the number of state governments interested. Much the same situation has developed in British Columbia, where the sockeye of the Fraser are taken by the canners of Puget sound in quantities that largely exceed the catch of the Canadian canners and by trap nets and other methods forbidden in Canadian waters. In 1906, an international commission took the first step in the direction of a mutual understanding on this vital question.

Fishing Bounties—An important though indirect aftermath of the Washington Treaty remains. By an Act of 1882 (45 Vict., c. 18) for the development of the sea fisheries and the encouragement of boat building, provision was made for the distribution annually among fishermen and the owners of fishing boats of $150,000 in bounties, representing the interest on the amount of the Halifax award. An Act of 1891 (54-55 Vict., c. 42) increased the amount to $160,000, the details of the expenditure being settled each year by Order in Council. For the year 1921, payment was made on the following basis: to owners of vessels entitled to receive bounty, $1 per registered ton, payment to the owner of any one vessel not to exceed $80; to vessel fishermen entitled to receive bounty, $7 each; to owners of boats measuring not less than 13 feet keel, $1 per boat; to boat fishermen entitled to receive bounty, $5.30 each. The claims received numbered 11,674, of which 11,654 were paid, as compared with 9,671 received and 9,664 paid in the previous year. The total amount paid in 1921 was $159,449. Details of the distribution of bounties for the years 1918 to 1921 are as follows:—

1.—Government Bounties to Fishermen in the fiscal years 1918 to 1921.

Provinces.	Number of men who received bounties.				Values of bounties paid.			
	1918.	1919.	1920.	1921.	1918.	1919.	1920.	1921.
	No.	No.	No.	No.	$	$	$	$
Prince Edward Island	2,333	1,805	1,187	1,562	10,392	8,702	8,110	9,413
Nova Scotia	14,141	13,538	11,289	12,507	85,001	85,521	93,873	91,410
New Brunswick	2,492	2,240	1,544	1,948	17,114	16,085	13,774	14,640
Quebec	10,875	9,667	5,560	7,384	47,168	44,828	36,762	43,986
Total	**29,841**	**27,250**	**19,580**	**23,401**	**159,675**	**155,136**	**152,519**	**159,449**

4.—The Modern Fishing Industry.

The existing fishing industry of Canada is in the main the growth of the past half-century. In 1844, the estimated value of the catch was only $125,000. It doubled in the following decade, and by 1860 had well passed the million mark. Ten years later it was six millions, and this was again more than doubled by 1878. In the 90's it passed twenty millions, and in 1911, thirty-four millions. The highest record was reached in 1918, with over sixty millions. (It will be understood that these figures represent the total values of fish marketed, whether in a fresh, dried, canned or otherwise prepared state). Meanwhile the number of employees has mounted to over 80,000, and the total capital invested to over $50,000,000 in certain years, though the industry as a whole did not progress proportionately with the marked industrial expansion which set in after 1896 in Canada.

Among individual fish products, the cod and the salmon long disputed the primacy; if the record back to the beginning is taken the cod is the most valuable fishery; in the past fifteen years, however, the salmon has definitely taken the lead, and the heavy pack and high price of lobsters have more than once sent cod down

to third place. This has, of course, affected the relative standing of the provinces accordingly, British Columbia now occupying the leadership that in earlier times belonged to Nova Scotia. Herring and mackerel used to follow cod, but have been displaced by halibut and whitefish. The yearly record of production since 1870, the total production by provinces for the past five years and the record by principal fish products for the past five years in descending order of importance are shown in Tables 2, 3 and 4.

2.—Total Value of the Fisheries of Canada in the fiscal years 1870 to 1921.

Year.	Value.	Year.	Value.	Year.	Value.	Year.	Value.
	$		$		$		$
1870	6,577,391	1883	16,958,192	1896	20,407,425	1909–10	29,629,167
1871	7,573,199	1884	17,766,404	1897	22,783,546	1910–11	29,965,433
1872	9,570,116	1885	17,722,973	1898	19,667,121	1911–12	34,667,872
1873	10,754,997	1886	18,679,288	1899	21,891,703	1912–13	33,389,464
1874	11,681,886	1887	18,386,103	1900	21,557,639	1913–14	33,207,748
1875	10,350,385	1888	17,418,510	1901	25,737,153	1914–15	31,264,631
1876	11,117,000	1889	17,665,256	1902	21,959,433	1915–16	35,860,708
1877	12,005,934	1890	17,714,902	1903	23,101,878	1916–17	39,208,378
1878	13,215,678	1891	18,977,878	1904	23,516,439	1917[1]	52,312,044
1879	13,529,254	1892	18,941,171	1905	29,479,562	1918[1]	60,250,544
1880	14,499,979	1893	20,686,661	1906	26,279,485	1919[1]	56,508,479
1881	15,817,162	1894	20,719,573	1907-08	25,499,349	1920[1]	49,241,339
1882	16,824,092	1895	20,199,338	1908-09	25,451,085	1921[1]	34,930,935

[1]Calendar year.

3.—Total Value of Fisheries by Provinces in the calendar years 1917-1921.

Provinces.	1917.	1918.	1919.	1920.	1921.
	$	$	$	$	$
Prince Edward Island	1,786,310	1,148,201	1,536,844	1,708,723	924,529
Nova Scotia	14,468,319	15,143,066	15,171,929	12,742,659	9,778,623
New Brunswick	6,143,088	6,298,990	4,979,574	4,423,745	3,690,726
Quebec	3,414,378	4,568,773	4,258,731	2,592,382	1,815,284
Ontario	2,866,419	3,175,111	3,410,750	3,336,412	3,065,042
Manitoba	1,543,288	1,830,435	1,031,117	1,249,607	1,023,187
Saskatchewan	620,238	447,012	475,797	296,472	243,018
Alberta	184,009	318,913	333,330	529,078	408,868
British Columbia	21,518,595	27,282,223	25,301,607	22,329,161	13,953,670
Yukon	67,400	37,820	8,800	33,100	28,988
Total for Canada	**52,312,044**	**60,250,544**	**56,508,479**	**49,241,339**	**34,931,935**

4.—Quantity and Value of Chief Commercial Fishes, 1917-1921.

Kind of Fish.	1917.	1918.	1919.	1920.	1921	Increase or decrease 1921 compared with 1920 inc. +, dec.−.
Salmon.....cwt.	1,642,770	1,531,773	1,688,653	1,284,729	878,124	−406,605
$	17,411,029	17,869,517	17,889,913	15,595,970	9,305,763	−6,290,207
Lobsters.....cwt.	474,871	264,096	345,806	399,985	393,625	−6,360
$	5,654,265	3,531,104	5,338,343	7,152,455	5,143,403	−2,009,052
Cod.....cwt.	2,302,987	2,206,666	2,606,770	1,982,706	2,033,699	+50,993
$	8,281,920	10,083,562	9,987,612	6,270,171	4,594,970	−1,675,201
Halibut.....cwt.	140,024	207,139	243,449	262,726	357,450	+94,724
$	2,066,635	5,490,226	5,119,842	4,535,188	4,112,942	−422,246
Herring.....cwt.	1,481,708	1,973,669	1,573,986	2,072,723	1,662,135	−410,588
$	3,693,688	4,719,561	3,347,080	3,428,298	2,227,801	−1,200,497

4.—Quantity[1] and Value[2] of Chief Commercial Fishes, 1917-1921—concluded.

Kind of Fish.	1917.	1918.	1919.	1920.	1921.	Increase or decrease 1921 compared with 1920 inc. +, dec.−.
Whitefish.....cwt.	178,838	205,044	197,403	181,764	184,072	+2,308
$	1,248,006	1,927,863	1,849,741	2,015,299	1,916,698	−98,601
Mackerel.....cwt.	167,067	196,781	229,877	142,347	145,544	+3,197
$	1,333,354	1,937,211	2,035,849	1,126,703	1,124,679	−2,024
Haddock.....cwt.	712,416	554,366	564,574	441,745	269,222	−172,523
$	2,936,719	2,796,171	2,048,746	1,522,680	899,629	−623,051
Smelts.....cwt.	73,153	87,555	75,271	58,118	84,597	+26,479
$	1,027,555	971,206	835,195	789,361	835,393	+46,032
Pickerel (including blue pickerel) cwt.	86,425	70,088	85,644	95,678	128,913	+33,235
$	650,632	649,180	750,163	868,048	811,747	−56,301
Trout.....cwt.	75,662	86,608	68,670	55,763	61,348	+5,585
$	699,950	808,770	862,966	708,633	745,014	+36,381
Sardines.....bbl.	274,359	295,770	214,525	196,649	152,471	−44,178
$	1,910,705	2,320,513	830,074	860,268	646,463	−213,805
Tullibee.....cwt.	64,910	74,411	49,457	38,588	62,395	+23,807
$	333,686	324,022	268,999	246,319	212,563	−33,756
Pike.....cwt.	79,383	60,100	58,163	43,691	40,563	−3,128
$	429,396	403,514	327,675	264,896	175,987	−88,909
Pollock.....cwt.	189,908	164,502	227,963	141,302	134,407	−6,895
$	486,195	574,832	602,264	295,102	172,822	−122,280
Clams and quahaugs.....bbl.	55,655	40,554	36,446	26,143	31,587	+5,444
$	222,965	169,799	160,125	147,409	171,623	+24,214
Perch.....cwt.	24,707	27,886	18,547	20,976	27,481	+6,505
$	126,723	150,608	185,257	206,685	169,552	−37,133
Hake and cusk.....cwt.	321,605	245,051	244,749	175,719	102,066	−73,653
$	890,265	844,565	645,570	361,446	145,400	−216,046
Black cod.....cwt.	[3]	29,966	10,527	25,783	20,317	−5,466
$	–	285,034	116,580	181,202	142,558	−38,644
Oysters.....bbl.	13,632	13,916	14,565	14,526	18,823	+4,297
$	109,265	123,570	153,276	146,863	126,686	−20,177
Pilchards.....cwt.	1,363	72,723	65,624	88,050	19,737	−68,313
$	11,810	413,853	371,871	540,265	101,945	−438,320

[1]Caught and landed. [2]Marketed. [3]Included with cod.

Operations in 1921—Detailed Record of Production.—The total value of the products of the Canadian fishing industry in the calendar year 1921 was $34,931,935, compared with $49,241,339 for 1920 and $56,508,479 for 1919. (The value of the fish at the vessel's or boat's side was $23,173,592 in 1921.) This is the lowest since 1914, and $25,000,000 below the record year of 1918. The fall in prices and demoralized marketing conditions, resulting in lessened catches, were the chief factors in the decline. In Tables 5 and 6 will be found a detailed statement for the whole of Canada of each fish product marketed, with comparative figures for the preceding year,—Table 5 dealing with sea-fish and Table 6 with products of the inland fisheries. In Table 7, an analysis is made of the change in the value of each product from the preceding year due to variations in price and quantity respectively. It will be seen that the largest items of decrease in quantity were salmon,

lobsters, herring, haddock, sardines and pilchards, whilst on the other hand large increases are shown for cod, halibut, smelts, pickerel and tullibee. Lower prices were noted for all kinds of fish. In Tables 8 and 9 the number and operations of the fish canning and curing establishments are shown.

5.—Quantities and Values of Sea Fish Marketed during the calendar years 1920 and 1921.

Kinds of Fish.	1920.		1921.	
	Quantity.	Value.	Quantity.	Value.
		$		$
Cod, used fresh..... cwt.	118,755	702,667	137,105	583,680
" green-salted..... "	167,840	932,173	175,320	675,798
" smoked fillets..... "	38,055	436,778	16,577	185,111
" smoked..... "	278	3,810	245	1,912
" dried..... "	444,776	3,809,470	472,559	2,868,431
" boneless..... "	25,547	344,215	25,378	268,400
" canned.....cases	3,481	29,348	1,072	9,538
" roe.....cwt.	40	400	-	-
" liver oil, medicinal.....gal.	11,049	11,310	2,300	2,100
Haddock, used fresh.....cwt.	107,500	455,647	118,535	394,806
" canned.....cases	17,020	129,654	5,015	44,292
" smoked.....cwt.	67,750	623,214	39,943	363,873
" boneless..... "	136	1,780	495	4,950
" green-salted..... "	25,443	74,440	12,507	37,692
" dried..... "	38,835	237,945	11,864	54,016
Hake and cusk, used fresh.....cwt.	3,589	10,357	8,514	13,093
" green-salted..... "	40,705	114,679	22,641	45,427
" smoked..... "	150	1,200	5	35
" smoked fillets..... "	2,606	33,385	3,177	36,599
" dried..... "	27,370	199,015	12,489	47,360
" boneless..... "	347	2,810	367	2,886
Pollock, used fresh.....cwt.	11,960	26,821	8,857	12,946
" green-salted..... "	17,215	54,727	18,592	40,407
" smoked fillets..... "	2,630	34,055	253	3,189
" dried..... "	29,131	179,499	29,741	116,280
Whiting, used fresh.....cwt.	36	274	44	318
Halibut, used fresh.....cwt.	262,434	4,533,650	357,158	4,110,364
" smoked..... "	77	1,128	18	298
" smoked fillets..... "	-	-	22	445
" canned.....cases	41	410	165	1,835
Flounders, brill, plaice, etc., used fresh.....cwt.	14,695	70,834	4,152	15,749
Skate, used fresh..... "	1,448	5,278	1,969	8,375
Soles, used fresh..... "	2,374	20,012	3,010	20,219
Herring, used fresh.....cwt.	94,771	206,656	64,061	163,801
" boneless..... "	611	6,670	100	1,000
" canned.....cases	33,769	200,368	4,966	30,597
" smoked.....cwt.	148,304	590,132	49,184	219,196
" dry-salted..... "	512,168	872,107	479,971	667,230
" pickled.....bbl.	47,038	308,725	46,281	271,992
" used as bait..... "	182,675	361,349	179,080	388,002
" fertilizer..... "	73,729	86,187	51,476	46,715
Mackerel, used fresh.....cwt.	61,444	631,144	88,317	795,699
" canned.....cases	1,869	12,535	202	1,412
" salted.....bbl.	26,144	483,024	19,063	327,568
Sardines, canned.....cases	129,925	627,972	111,335	512,174
" sold fresh and salted.....bbl.	164,101	232,296	124,446	132,999
Pilchards, used fresh.....cwt.	553	1,212	9	37
" canned.....cases	91,929	503,937	16,091	91,328
" salted.....bbl.	1,154	6,925	-	-
" used as bait..... "	9,937	28,191	4,232	10,580
Alewives, used fresh.....cwt.	12,057	30,870	11,260	29,227
" salted.....bbl.	17,143	155,809	1,652	9,350
" smoked.....cwt.	1,499	20,198	1,536	18,328

5.—Quantities and Values of Sea Fish Marketed during the calendar years 1920 and 1921—concluded.

Kinds of Fish.	1920.		1921.	
	Quantity.	Value.	Quantity.	Value.
		$		$
Bass, used fresh.....cwt.	779	6,857	377	4,860
Perch, used fresh..... "	2,021	16,437	2,180	19,646
Salmon, used fresh..... "	216,865	2,750,351	269,165	2,910,254
" canned.....cases	1,188,599	12,419,034	602,863	5,936,524
" smoked.....cwt.	2,667	23,131	1,325	19,082
" dry-salted..... "	33,645	151,129	64,205	236,938
" mild cured..... "	8,924	205,734	9,954	148,923
" pickled..... "	526	5,011	2,029	13,452
" roe..... "	-	-	37	100
Shad, used fresh..... "	408	5,961	913	10,121
" salted.....bbl.	-	-	17	788
Smelts, used fresh.....cwt.	58,056	788,617	84,371	833,109
Sturgeon, used fresh..... "	338	5,470	257	5,668
" caviar.....lb.	-	-	114	114
Trout, used fresh.....cwt.	884	15,771	1,073	13,948
Black cod, used fresh..... "	11,369	70,110	6,724	58,443
" green-salted..... "	42	409	-	-
" smoked..... "	7,164	110,683	6,135	79,703
" dried..... "	-	-	441	4,412
Red cod, etc., used fresh..... "	3,816	19,574	2,447	10,025
" smoked..... "	38	442	65	642
Albacore, used fresh..... "	1,542	10,587	2,017	6,095
Caplin, used fresh.....bbl.	7,865	17,090	12,466	13,794
Eels, used fresh.....cwt.	2,256	22,037	3,101	30,358
Octopus, used fresh..... "	394	4,082	371	2,933
Oulachons, used fresh..... "	2,115	9,096	188	1,185
Squid, used as bait.....bbl.	4,950	12,280	12,322	31,321
Swordfish, used fresh.....cwt.	3,351	51,104	6,851	96,413
Tom cod, used fresh..... "	8,247	31,015	18,998	26,747
Mixed fish, used fresh..... "	1,591	2,116	1,631	5,567
Shell Fish—				
Clams and quahaugs, used fresh.....bbl.	8,986	33,383	9,217	39,914
" canned.....cases	17,195	114,026	22,384	131,544
" chowder..... "	-	-	44	165
Cockles, used fresh.....cwt.	214	657	290	861
Crabs, used fresh..... "	10,660	58,263	7,026	46,889
Lobsters, in shell..... "	69,000	1,434,638	118,837	2,022,795
" canned.....cases	163,299	5,687,484	137,607	3,107,426
" tomalley..... "	2,619	30,333	1,295	13,182
Mussels, used fresh.....cwt.	172	121	511	511
Oysters, used fresh.....bbl.	14,526	146,863	18,823	126,686
Scallops, shelled.....gal.	8,131	28,848	9,542	35,372
" canned.....cases	-	-	83	1,038
Shrimps, used fresh.....cwt.	563	13,536	623	13,066
Winkles, used fresh..... "	1,915	2,919	1,661	3,574
Dulse, dried..... "	-	-	1,060	7,060
Tongues and sounds, pickled or dried.....cwt.	1,144	10,025	273	2,006
Sealskins, fur.....No.	1,058	24,712	2,349	46,980
" hair..... "	4,891	14,699	2,080	5,475
Porpoise skins..... "	186	2,790	173	1,730
Whalebone and meal.....tons	503	15,090	-	-
Whale fertilizer..... "	1,033	82,630	-	-
Seal oil.....gal.	12,598	12,598	7,260	1,839
Porpoise oil..... "	3,720	3,720	-	-
Whale oil..... "	604,070	338,026	-	-
Fish oil..... "	342,686	279,885	248,613	61,721
Fish glue..... "	-	-	65	139
Fish meal.....tons	-	-	419	27,310
Fish fertilizer..... "	580	38,230	1,291	19,362
erring scales.....cwt.	-	-	3,500	17,500
Fish bones..... "	9,100	3,579	-	-
Fish skins..... "	6,260	16,069	-	-
Fish offal.....tons	2,076	7,515	-	-
Totals.....	-	**43,602,059**	-	**29,942,969**

6.—Quantities and Values of Inland Fish Marketed during the calendar years 1920 and 1921.

Kinds of Fish.	1920.		1921.	
	Quantity.	Value.	Quantity.	Value.
		$		$
Alewives, fresh....cwt.	142	426	67	335
" salted....bbl.	230	2,300	–	–
Bass....cwt.	360	5,666	262	3,420
Carp.... "	11,900	52,637	11,680	49,336
Caplin.... "	–	–	777	388
Catfish.... "	6,263	46,813	6,277	50,648
Eels.... "	7,885	84,675	8,710	78,417
Goldeyes, fresh.... "	2,123	10,685	820	2,425
" smoked.... "	1,245	22,829	1,327	24,950
Herring, fresh.... "	126,673	758,178	75,522	421,934
" salted....bbl.	6,321	37,926	2,889	17,334
Maskinonge....cwt.	4	78	–	–
Mixed fish.... "	36,261	160,298	38,775	171,990
Mullets.... "	24,183	62,116	5,370	14,888
Perch.... "	18,955	190,248	25,301	149,906
Pickerel, doré.... "	61,883	631,483	64,854	619,570
Pickerel (blue).... "	33,795	236,565	64,059	192.177
Pike.... "	43,691	264,896	40,563	175,987
Porpoise....No.	74	4,440	–	–
Salmon....cwt.	2,706	41,580	2,201	40,490
Sardines....bbl.	–	–	129	1,290
Shad....cwt.	1,048	12,704	2,267	22,788
Smelts.... "	62	744	226	2,284
Sturgeon.... "	3,035	50,901	3,078	74,687
" caviar....lb.	6,050	6,393	12,325	13,395
" bladders....No.	438	219	–	–
Trout, fresh....cwt.	51,489	663,482	57,300	705,661
" salted.... "	2,260	29,380	1,632	20,245
" canned....cases	–	–	645	5,160
Tullibee, fresh....cwt	38,514	245,644	62,395	212,563
" smoked.... "	37	675	–	–
Whitefish, fresh.... "	176,516	1,969,812	183,633	1,912,558
" salted.... "	3,499	45,487	270	3,780
" smoked.... "	–	–	10	200
" canned....cases	–	–	20	160
Total....	–	**5,639,280**	–	**4,988,966**

7.—Yield of the Fisheries of Canada, compared as to Quantity and Value, for 1920 and 1921.[1] ("000" omitted).

Kinds of Fish.	Actual value, 1921.	Value at prices of 1920.	Actual value, 1920.	Increase (+) or decrease (−).	Due to higher (+) or lower prices (−).	Due to larger (+) or smaller (−) quantities.
	$	$	$	$	$	$
Salmon....	9,306	10,661	15,597	− 6,291	− 1,355	− 4,936
Lobsters....	5,143	7,039	7,152	− 2,009	− 1,896	− 113
Cod....	4,595	6,431	6,270	− 1,675	− 1,836	+ 161
Halibut....	4,113	6,170	4,535	− 422	− 2,057	+ 1,635
Herring....	2,228	2,749	3,428	− 1,200	− 521	− 679
Whitefish....	1,916	2,041	2,015	− 99	− 125	+ 26
Mackerel....	1,125	1,152	1,127	− 2	− 27	+ 25
Haddock....	900	928	1,523	− 623	− 28	− 595
Smelts....	835	1,149	789	+ 46	− 314	+ 360
Pickerel....	812	1,169	868	− 56	− 357	+ 301
Trout....	745	779	709	+ 36	− 34	+ 70
Sardines....	646	667	860	− 214	− 21	− 193
Tullibee....	212	398	246	− 34	− 186	+ 152
Pike....	176	246	265	− 89	− 70	− 19
Pollock....	173	280	295	− 122	− 107	− 15
Clams and quahaugs....	171	178	147	+ 24	− 7	+ 31
Perch....	170	271	207	− 37	− 101	+ 64
Hake and cusk....	145	210	361	− 216	− 65	− 151
Black cod....	142	142	181	− 39	–	− 39
Oysters....	127	190	147	− 20	− 63	+ 43
Pilchards....	102	133	540	− 438	− 31	− 407
Oils, fish....	62	203	280	− 218	− 141	− 77
Other articles of the fisheries....	1,088	1,388	1,699	− 611	− 300	− 311
Total....	**34,932**	**44,574**	**49,241**	**− 14,309**	**− 9,642**	**− 4,667**

[1]Calendar years.

8.—Number of Fish Canning and Curing Establishments, by Provinces, 1921.

Classification.	P.E.I.	N.S.	N.B.	Que.	Prairie provinces.	B.C.	Total for Canada.
	No.	No.	No.	No.	No.	No.	No.
Lobster canneries	160	141	172	65	–	–	538
Salmon canneries	–	–	–	2	–	56	58
Clam canneries	1	2	4	–	–	1	8
Sardine and other fish canneries	–	1	2	1	1	–	5
Fish oil factories	–	1	–	–	–	4	5
Fish curing establishments	1	98	59	26	2	42	228
Total	**162**	**243**	**237**	**94**	**3**	**103**	**842**

9.—Materials Used and Value of Products of Fish Canning and Curing Establishments, 1920 and 1921.

Materials and Products.	1920.	1921.
	$	$
Materials used—		
Fish	14,347,089	8,524,407
Salt	456,013	292,526
Containers	4,229,490	2,874,809
Other	330,437	16,736
Total	**19,363,029**	**11,708,478**
Products—		
Fish marketed for consumption, fresh	5,092,174	5,376,393
Fish canned, cured or otherwise prepared	25,807,973	13,517,739
Total	**30,900,147**	**18,894,132**

Capital and Employees.—In 1921, the total capital invested in the fisheries was as follows: (*a*) in vessels, boats, nets, weirs, traps, wharves, ice-houses, etc., used in the primary operations of capturing the fish, $26,257,487, of which $22,079,805 was invested in the sea fisheries, and $4,177,682 in the inland fisheries; (*b*) in fish canning and curing establishments (land, buildings, machinery, supplies on hand, cash and operating accounts) $19,411,990—grand total $45,669,477. The number of employees engaged in the primary operations of fishing was 55,230 in 1921, and in canning and curing establishments, 14,104, a total of 69,334. The total salaries and wages bill in canneries and fish curing establishments was $2,973,386. A decline in capital of nearly $5,000,000 from 1920 is due to continued deflation in values. Tables **10** and **11**, herewith, show the items included in the above totals, with comparative figures for 1920, whilst Table **12** analyzes the salaries, wages and earnings of the employees in canneries, etc.

10.—Number and Capital Value of Fishing Vessels, Boats, Nets, Traps, etc., used in the Fisheries of Canada, 1920 and 1921.

Equipment.	1920.		1921.	
	Number.	Value.	Number.	Value.
		$		$
Sea Fisheries—				
Steam trawlers	9	850,000	8	725,000
Steam fishing vessels	31	688,800	17	286,000
Sailing and gasoline vessels	1,046	5,783,914	984	4,393,865
Boats (sail and row)	12,320	821,660	13,689	855,414
Boats (gasoline)	14,611	6,011,490	14,000	5,390,328
Carrying smacks	299	348,260	416	396,370
Gill nets, seines, trap and smelt nets, etc	94,158	4,544,019	100,898	4,220,905
Weirs	1,054	774,380	668	489,510
Trawls	26,599	497,294	23,658	431,571
Hand lines	63,029	119,534	59,407	94,498
Crab traps	4,500	27,000	1,800	10,800
Oyster plant and equipment	1	19,360	1	19,360
Lobster traps	1,290,639	1,879,619	1,300,921	1,718,449
Fishing piers and wharves	2,617	1,375,650	2,601	1,419,415
Freezers and ice-houses	640	670,469	667	528,605
Small fish and smoke houses	7,524	1,095,605	7,799	1,099,715
Total value, Sea Fisheries	–	**25,507,054**	–	**22,079,805**

Equipment.	1920.		1921.	
	Number.	Value.	Number.	Value.
		$		$
Inland Fisheries—				
Steam vessels or tugs	142	993,357	136	921,938
Boats (sail and row)	2,280	148,968	2,528	151,244
Boats (gasoline)	1,012	529,621	1,114	586,250
Gill nets	–	1,246,746	–	1,056,309
Seines	426	34,305	338	33,700
Pound nets	1,108	777,107	1,072	722,410
Hoop nets	2,282	95,037	2,229	78,818
Lines	1,016	7,282	1,243	25,234
Weirs	321	41,058	431	116,582
Eel traps	175	525	193	772
Fish wheels	4	850	5	580
Spears	122	410	116	1,001
Fishing piers and wharves	341	127,818	369	128,293
Freezers and ice-houses	600	359,905	738	330,331
Small fish and smoke houses	93	23,170	85	24,220
Total value, Inland Fisheries	–	**4,386,159**	–	**4,177,682**

Description.	1920.		1921.	
	No.	Value.	No.	Value.
		$		$
Fish Canning and Curing Establishments—				
Lobster canneries	578	2,426,920	538	1,976,696
Salmon canneries	67	10,072,356	58	10,617,367
Clam canneries	9	90,449	8	71,605
Sardine and other fish canneries	8	750,204	5	830 678
Whale oil and fish oil factories	11	1,558,147	5	174 081
Fish curing establishments	267	5,614,189	228	5.741 563
Total of Fish Canning and Curing Establishments	**940**	**20,512,265**	**842**	**19 411 990**
Grand Total Capital Invested in Fisheries	–	**50,405,478**	–	**45 669 477**

11.—Number of Persons Employed in the Fisheries of Canada, 1920 and 1921.

Employed in	Sea Fisheries.		Inland Fisheries.	
	1920.	1921.	1920.	1921.
	No.	No.	No.	No
Steam trawlers	206	175	–	–
Vessels	6,858	5,988	854	736
Boats	41,992	40,697	4,888	5,298
Carrying smacks	538	585	–	–
Fishing not in boats	–	–	1,861	1,751
Total	**49,594**	**47,445**	**7,603**	**7,785**

Employed in	In Fish Canning and Curing Establishments.					
	1920.			1921.		
	Male.	Female.	Total.	Male.	Female.	Total.
Lobster canneries	4,280	4,001	8,281	3,323	3,504	6,827
Salmon canneries	4,266	2,056	6,322	2,550	1,748	4,298
Clam canneries	57	105	162	37	109	146
Sardine and other fish canneries	431	324	755	290	413	703
Whale oil and fish oil factories[1]	229	7	236	42	–	42
Fish curing establishments	2,452	291	2,743	1,901	187	2,088
Total	**11,715**	**6,784**	**18,499**	**8,143**	**5,961**	**14,104**
Grand total	**68,912**	**6,784**	**75,696**	**63,373**	**5,961**	**69,334**

[1]Fish oil factories only in 1921.

12.—Salaries and Wages in Fish Canning and Curing Establishments, 1920 and 1921.

	On Salaries.		On Wages.		Contract and Piece-Workers.		Total.	
	No.	$	No.	$	No.	$	No.	$
1920	651	759,176	13,137	3,180,701	4,711	916,413	18,499	4,856,290
1921	487	551,330	10,534	2,023,040	3,083	399,016	14,104	2,973,386

Trade.—For reasons already noted, the domestic consumption of fish is relatively small in Canada, and the trade depends largely upon foreign markets. Perhaps 60 per cent of the annual capture is an average export, of which the United States takes approximately one half and Great Britain one quarter. In the fiscal year 1921-22, total exports amounted to $29,521,894, of which $12,737,432 went to the United States and $5,541,103 to Great Britain. The most important single export is canned salmon (to Great Britain and European markets), followed closely by cod, dry salted (to the West Indies, South America, etc.). For fresh fish, especially whitefish and lobsters, the United States is the chief market. In brief, Canada's export trade in fish falls below that of Great Britain and Norway alone; including Newfoundland it exceeds both. Canadian imports of fish in 1921-22 amounted to $970,028. A general review of the import and export trade in fish over the past twenty years is given in Table **13**, whilst Table **14** gives the comparative record of exports by countries during the past two years. Table **15** shows the leading items of export for 1921 and 1922. For a complete analysis of imports and exports, see annual report on Fisheries Statistics, issued by the Dominion Bureau of Statistics.

13.—Value of Exports and Imports of Fish and Fish Products, 1902-1922.

Years.	Exports, fisheries, domestic.	Imports of fish for home consumption.		Years.	Exports, fisheries, domestic.	Imports of fish for home consumption.	
		Dutiable.	Free.			Dutiable.	Free.
	$	$	$		$	$	$
1902	14,143,294	591,064	451,835	1913	16,336,721	1,519,571	910,923
1903	11,800,184	629,545	633,680	1914	20,623,560	1,469,305	635,231
1904	10,759,029	704,577	685,936	1915	19,687,068	1,080,225	568,880
1905	11,114,318	713,264	630,660	1916	22,377,977	804,398	537,342
1906	16,025,840	756,410	1,152,253	1917	24,889,253	1,259,799	818,613
1907[1]	10,362,142	699,218	862,880	1918	32,602,151	966,643	1,397,127
1908	13,867,367	795,612	1,026,996	1919	37,137,072	1,054,848	2,079,530
1909	13,319,664	746,315	814,770	1920	42,285,035	2,605,379	1,334,718
1910	15,663,162	909,036	715,703	1921	33,581,383	2,416,152	1,809,960
1911	15,675,544	1,123,581	669,033	1922	29,521,894	2,172,850	970,028
1912	16,704,678	1,203,045	984,458				

[1]Nine months.

14.—Exports of the Fisheries, the produce of Canada, by principal countries, in the fiscal years 1921 and 1922.

Exports to—	1921.	1922.	Exports to—	1921.	1922.
	$	$		$	$
United Kingdom	7,682,423	5,541,103	China	187,744	188,380
Australia	452,664	727,434	Costa Rica	19,928	57,564
British W. Indies	1,488,827	1,347,408	Cuba	1,459,988	1,176,125
British Guiana	335,023	224,435	Denmark	82,956	82,863
New Zealand	246,228	139,183	France	880,500	2,564,953
Newfoundland	51,989	29,020	Greece	28,130	24,995
Hong Kong	437,211	319,636	Italy	10,793	671,214
Bermuda	50,503	31,819	Japan	527,561	724,415
South Africa	80,835	23,538	Netherlands	28,780	67,485
Straits Settlements	235,509	113,829	Dutch East Indies	46,848	30,017
Fiji	95,595	43,099	Dutch Guiana	55,398	82,050
Egypt and Sudan	8,345	26,695	Norway	60,801	29,154
Gibraltar	–	55,645	Sweden	263,598	129,805
Other British possessions	61,132	31,977	Panama	45,585	81,730
			Porto Rico	1,169,618	1,073,937
Total British Empire	**11,227,280**	**8,654,821**	Other foreign countries	107,683	62,365
United States	15,728,835	12,737,432	**Total Foreign Countries**	**22,108,438**	**20,867,073**
Belgium	187,449	283,720			
Brazil	1,216,243	798,869	**Grand Total of Exports**	**33,581,383**	**29,521,894**

15.—Exports of the Fisheries, compared as to Quantity and Value, for the fiscal years 1921 and 1922. ("000 omitted").

Kinds of Fish.	Actual value, 1922.	Value at prices of 1921.	Actual value, 1921.	Increase (+) or decrease (−).	Due to higher (+) or lower (−) prices.	Due to larger (+) or smaller (−) quantities.
	$	$	$	$	$	$
Alewives, salted	65	81	127	− 62	− 16	− 46
Bait fish	65	102	51	+ 14	− 37	+ 51
Codfish, boneless, canned and preserved	161	196	225	− 64	− 35	− 29
Codfish, dried	5,509	7,760	5,220	+ 289	− 2,251	+ 2,540
Codfish, fresh and frozen	84	92	117	− 33	− 8	− 25
Codfish, green salted (pickled)	643	890	766	− 123	− 247	+ 124
Clams, fresh and canned	84	99	67	+ 17	− 15	+ 32
Eels	86	90	84	+ 2	− 4	+ 6
Haddock, canned	1	1	36	− 35	–	− 35
Haddock, dried	162	218	295	− 133	− 56	− 77
Haddock, fresh and frozen	62	79	75	− 13	− 17	+ 4
Haddock, smoked	139	145	152	− 13	− 6	− 7
Halibut, fresh and frozen	855	1,090	913	− 58	− 235	+ 177
Herring, lake, fresh and frozen	292	610	810	− 518	− 318	− 200
Herring, lake, pickled	9	12	14	− 5	− 3	− 2
Herring, sea, canned	93	156	274	− 181	− 63	− 118
Herring, sea, dry salted	1,000	1,136	991	+ 9	− 136	+ 145

15.—Exports of the Fisheries, compared as to Quantity and Value, for the fiscal years 1921 and 1922—concluded. ("000 omitted").

Kinds of Fish.	Actual value, 1922.	Value at prices of 1921.	Actual value, 1921.	Increase (+) or decrease (−).	Due to higher (+) or lower (−) prices.	Due to larger (+) or smaller (−) quantities.
	$	$	$	$	$	$
Herring, sea, fresh and frozen	104	130	247	− 143	− 26	− 117
Herring, sea, pickled	389	417	482	− 93	− 28	− 65
Herring, sea, smoked	201	281	387	− 186	− 80	− 106
Lobsters, canned	3,756	5,635	5,179	− 1,423	− 1,879	+ 456
Lobsters, fresh	1,403	1,432	1,034	+ 369	− 29	+ 398
Mackerel, fresh and frozen	560	732	574	− 14	− 172	+ 158
Mackerel, pickled	383	405	564	− 181	− 22	− 159
Pilchards, canned	131	121	269	− 138	+ 10	− 148
Pollock, hake and cusk, fresh and frozen	9	8	11	− 2	+ 1	− 3
Pollock, hake and cusk, dried	442	644	534	− 92	− 202	+ 110
Pollock, hake and cusk, green salted	27	37	68	− 41	− 10	− 31
Salmon, canned	6,433	10,717	7,581	− 1,148	− 4,284	+ 3,136
Salmon, dry salted (chum)	221	194	131	+ 90	+ 27	+ 63
Salmon, fresh and frozen	993	910	744	+ 249	+ 83	+ 166
Salmon, pickled	231	275	207	+ 24	− 44	+ 68
Salmon or lake trout	347	379	364	− 17	− 32	+ 15
Sea fish, other, fresh	30	10	31	− 1	+ 20	− 21
Sea fish, other, preserved	2	2	10	− 8	−	− 8
Smelts	1,064	1,068	774	+ 290	− 4	+ 294
Swordfish	129	120	38	+ 91	+ 9	+ 82
Tullibee	119	174	325	− 206	− 55	− 151
Whitefish	1,151	1,305	1,331	− 180	− 154	− 26
Fish, other, fresh and frozen	1,829	2,120	1,916	− 87	− 291	+ 204
Tongues and sounds	3	8	19	− 16	− 5	− 11
Oil, fish, cod	80	181	87	− 7	− 101	+ 94
Oil, fish, other	22	69	66	− 47	− 47	+ 3
Oil, seal	12	18	2	+ 10	− 6	+ 16
Oil, whale	27	79	95	− 68	− 52	− 16
Other articles of the fisheries	114	156	294	− 180	− 42	− 138
Totals	**29,522**	**40,384**	**33,581**	**− 4,059**	**− 10,862**	**+ 6,803**
Increase or decrease, per cent	−	−	−	− 12·1	− 32·3	+ 20·2

VI.—MINES AND MINERALS.[1]

The appended description of the Mines and Minerals Industry in Canada is divided into five parts. First, there is a summary of general production, followed by a statement on the various metallic minerals found in Canada; third comes a discussion of non-metallic minerals and fourth of clay products and structural materials. The fifth part deals with the industrial organization of the mining industry.

1. General Production.

The greater part of the area of Canada still awaits systematic prospecting and even in the older districts thorough development work has not been completed. The Geological Survey and the Mines Branch of the Dominion Government, as well as the Departments of Mines of several of the Provincial Governments, have done valuable exploration work. They have a number of capable men at work and their reports are of great value in forming an estimate of the mineral resources of the Dominion, but the country is so vast that at best they can do little more than describe surface conditions. The real value of mineral deposits can usually only

[1] See also article "Geological Formation of Canada" containing a section on the progress of the economic geology of Canada, (which may be regarded as basic to the mining industry), pp. 13-24 of this edition of the Year Book. This article is condensed in part from previous articles contributed by Messrs. R. W. Brock, M.A., L.L.D., F.G.S., formerly Director of the Geological Survey, and Wyatt Malcolm, M.A., Compiler of Geological Information, Department of Mines.

be determined by costly development work; and the lack of capital has retarded the development of mineral resources. The unprospected area is very great and since much of the northern territory has the same geological formation as some of the districts where mining operations are actively carried on, it may be anticipated that mineral production will in the future be greatly increased. As it is, mining, although only in its infancy, has become one of the leading extractive industries, exceeded in the value of production only by agriculture and forestry. The mineral production of Canada increased from $10,000,000 in 1886 to over $184,000,000 in 1922. The preliminary estimate of production for the first half of 1923 was $87,152,248 as compared with $60,361,109 in the first half of 1922. In 1921, Canada ranked first among the mineral producing countries of the world in the production of asbestos, first in nickel, third in silver, third in gold and ninth in coal.

The increasing importance of mineral production in Canada during the past generation is shown by the historical statistics of Table 1, while Table 2 gives comparative statistics of the production of individual minerals for 1921 and 1922, and Table 3 shows how far the variations in values between these years are due to differences in quantities produced and how far to changes in prices.

1.—Value of Mineral Production in Canada, calendar years 1886 to 1922.

Calendar Years.	Total value.	Value per capita.	Calendar Years.	Total value.	Value per capita.	Calendar Years.	Total value.	Value per capita.
	$	$		$	$		$	$
1886	10,221,255	2·23	1898	38,412,431	7·32	1910	106,823,623	15·44
1887	10,321,331	2·23	1899	49,234,005	9·27	1911	103,220,994	14·32
1888	12,518,894	2·67	1900	64,420,877	12·04	1912	135,048,296	18·32
1889	14,013,113	2·96	1901	65,797,911	12·16	1913	145,634,812	19·35
1890	16,763,353	3·50	1902	63,231,836	11·36	1914	128,863,075	16·75
1891	18,976,616	3·92	1903	61,740,513	10·83	1915	137,109,171	17·44
1892	16,623,415	3·39	1904	60,082,771	10·27	1916	177,201,534	22·05
1893	20,035,082	4·04	1905	69,078,999	11·49	1917	189,646,821	23·18
1894	19,931,158	3·98	1906	79,286,697	12·81	1918	211,301,897	25·36
1895	20,505,917	4·05	1907	86,865,202	13·75	1919	176,686,390	20·84
1896	22,474,256	4·38	1908	85,557,101	13·16	1920	227,859,665	26·40
1897	28,485,023	5·49	1909	91,831,441	13·70	1921	171,923,342	19·56
						1922	184,297,242	20·55

2.—Mineral Production of Canada, calendar years 1921 and 1922.

Products.	1921.		1922.		Increase (+) or Decrease (−).	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Metallic.		$		$	p.c.	p.c.
Cobalt, metallic and contained in oxide..... Lbs.	251,986	755,958	569,960	1,852,370	+ 126·1	+ 145·0
Copper..... "	47,620,820	5,953,555	42,879,818	5,738,177	− 10·0	− 13·7
Gold..... Fine ozs.	926,329	19,148,920	1,263,364	26,116,050	+ 36·3	+ 36·3
Iron, pig, from Canadian ore..... Tons	56,564	1,873,682	8,095	178,980	− 85·7	− 90·5
Iron ore sold for export "	1,058	3,272	1,781	4,938	+ 68·3	+ 50·9
Lead..... Lbs.	66,679,592	3,828,742	93,307,171	5,817,702	+ 39·9	+ 51·9
Nickel..... "	19,293,060	6,752,571	17,597,123	6,158,993	− 8·8	− 8·8
Palladium.....Crude ozs.	591	38,267	724	47,060	+ 22·5	+ 22·9
Platinum..... " "	292	21,910	469	45,783	+ 60·6	+ 108·9
Rhodium, Osmium, Iridium, Ruthenium Ozs.	57	9,690	392	31,360	+ 587·7	+ 223·6
Silver.....Fine ozs.	13,543,198	8,485,355	18,581,439	12,576,758	+ 37·1	+ 48·2
Zinc..... Lbs.	53,089,356	2,471,310	56,290,000	3,217,536	+ 6·0	+ 30·1
Total..... $	-	**49,343,232**	-	**61,785,707**	-	+ 25·2

NOTE.—According to a preliminary estimate, the mineral production in 1923 was $214,102,000, an increase of 12 p.c. over 1922.

2.—Mineral Production of Canada, calendar years 1921 and 1922—concluded.

Products.	1921.		1922.		Increase (+) or Decrease (−).	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		$		$	p.c.	p.c.
Non-metallic.						
Actinolite..... Tons	78	975	50	575	− 35·9	− 41·1
Arsenic, white, and in ore..... "	1,491	233,763	2,576	321,037	+ 72·7	+ 37·3
Asbestos..... "	92,761	4,906,230	163,706	5,552,723	+ 76·4	+ 13·1
Barytes..... "	270	9,567	289	9,537	+ 7·0	− 0·4
Chromite..... "	2,798	55,696	767	11,503	− 72·6	− 79·4
Coal..... "	15,057,498	72,451,656	15,157,431	65,518,497	+ 0·6	− 9·6
Corundum..... "	403	55,965	−	−	−	−
Feldspar..... "	29,868	230,754	27,727	248,402	− 7·2	+ 7·6
Fluorspar..... "	5,519	136,267	4,503	102,138	− 18·5	− 25·1
Graphite..... "	937	65,862	597	31,353	− 36·3	− 52·4
Grindstones..... "	1,281	64,067	1,605	43,742	− 21·6	− 31·8
Gypsum..... "	386,550	1,785,538	559,265	2,160,898	+ 44·6	+ 21·0
Magnesite..... "	3,730	81,320	2,849	76,294	− 23·7	− 6·2
Magnesium sulphate. "	2,029	39,506	1,021	24,107	− 49·7	− 39·0
Manganese..... "	68	3,400	73	2,044	+ 7·3	− 39·9
Mica..... "	702	70,063	3,349	152,263	+ 377·0	+ 117·3
Mineral water.....Gals.	328,273	21,716	221,433	14,220	− 32·6	− 34·6
Natro-alunite..... Tons	30	1,500	50	2,500	+ 66·6	+ 66·6
Natural gas.....M cu. ft.	14,077,601	4,594,164	14,682,651	5,846,501	+ 4·2	+ 27·2
Iron oxides..... Tons	9,048	93,610	7,285	110,608	− 19·5	+ 18·1
Peat..... "	1,666	6,664	3,000	14,500	+ 80·0	+ 117·5
Petroleum crude.....Bbls.	187,540	641,533	179,068	611,176	− 4·6	− 4·8
Phosphate..... Tons	30	450	190	1,796	+ 533·3	+ 249·1
Pyrites..... "	32,173	116,326	18,143	74,303	− 43·7	− 36·2
Quartz..... "	100,350	312,947	109,947	208,598	+ 9·5	− 33·4
Salt..... "	164,658	1,673,685	181,794	1,628,323	+ 10·4	− 2·8
Sodium carbonate..... "	197	14,775	202	3,027	+ 2·5	− 79·6
Sodium sulphate..... "	623	18,850	504	11,980	− 19·2	− 36·5
Talc..... "	10,124	144,565	13,195	188,458	+ 30·3	+ 30·3
Tripolite..... "	341	11,268	219	5,781	− 35·8	− 48·7
Total..... $	−	**87,842,682**	−	**82,976,794**	−	**− 5·6**
Structural Materials and Clay Products.						
Cement, Portland and Puzzolan.....Bbls.	5,752,885	14,195,143	6,943,972	15,438,481	+ 20·7	+ 8·7
Clay products—						
Bricks, common.... No.	22,438,243	3,567,503	294,919,113	4,714,658	+ 33·7	+ 32·1
" pressed..... "	80,947,398	1,738,293	90,577,826	1,839,549	+ 11·8	+ 5·8
Bricks, hollow building..... "	3,627,777	177,273	4,892,504	448,674	+ 34·8	+ 15·3
Bricks, moulded and ornamental..... "	1,995,284	50,576	41,851,765	865,664	+ 1,997·5	+ 1,611·6
Fire brick..... "	4,502,233	242,462	6,705,127	251,776	+ 48·9	+ 3·8
Fire clay..... Tons	2,931	29,851	10,196	55,185	+ 248·7	+ 84·8
Fire clay blocks.... $	−	91,685	−	67,588	−	− 26·3
Fireproofing and hollow porous blocks. "	−	452,296	−	542,611	−	+ 19·9
Kaolin..... Tons	124	1,888	1,197	17,866	+ 865·3	+ 846·3
Paving brick..... No.	−	−	150,813	5,972	−	−
Pottery from domestic clay..... $	−	231,262	−	266,391	−	+ 15·2
Sewer pipe..... No.	−	1,666,584	75,932	1,766,347	−	+ 5·9
Architectural terra-cotta..... $	−	134,193	−	188,789	−	+ 40·6
Tile, drain..... No.	−	473,952	14,730,963	407,386	−	− 14·1
Lime.....Bush.	6,879,067	2,781,197	7,742,651	3,165,005	+ 30·4	+ 13·8
Sand and gravel.....Tons	11,574,862	2,537,249	11,666,371	3,502,935	+ 0·7	+ 38·0
Slate..... "	−	22,335	1,899	14,871	−	− 33·4
Granite..... "	319,398	937,894	457,925	1,486,250	+ 43·3	+ 58·4
Limestone..... "	3,322,024	5,155,046	3,152,124	4,175,941	− 5·2	− 19·2
Marble..... "	1,650	172,720	1,912	231,894	+ 15·8	+ 34·3
Sandstone..... "	28,426	78,036	25,221	80,908	− 11·3	+ 3·6
Total..... $	−	**34,737,428**	−	**39,534,741**	−	**+ 13·8**
Grand Total. $	−	**171,923,342**	−	**184,297,242**	−	**+ 7·1**

3.—Mineral Production of Canada, compared as to Quantity and Value, in calendar years 1921 and 1922. ("000" omitted).

Products.	Actual value 1922.	Value at prices of 1921.	Actual value 1921.	Increase (+) or decrease (−).	Due to higher(+) or lower (−) prices.	Due to larger (+) or smaller (−) quantities.
Metallic.	$	$	$	$	$	$
Cobalt, metallic and contained in oxide	1,852	1,510	756	+ 1,096	+ 342	+ 754
Copper	5,738	5,360	5,954	− 216	+ 378	− 594
Gold	26,116	26,116	19,149	+ 6,967	-	+ 6,967
Iron, pig, from Canadian ore	179	1,387	1,874	− 1,695	− 1,208	− 487
Iron ore, sold for export	5	5	3	+ 2	-	+ 2
Lead	5,818	4,358	3,829	+ 1,989	+ 1,460	+ 529
Nickel	6,159	6,159	6,753	− 594	-	− 594
Palladium	47	47	38	+ 9	-	+ 9
Platinum	46	35	21	+ 25	+ 11	+ 14
Silver	12,577	11,641	8,485	+ 4,092	+ 936	+ 3,156
Zinc	3,218	1,394	2,471	+ 747	+ 1,824	− 1,077
Other	31	36	10	+ 21	− 5	+ 26
Total metallic $	**61,786**	**58,048**	**49,343**	**+12,443**	**+ 3,738**	**+ 8,705**
Non-metallic.						
Arsenic, white and in ore	321	417	234	+ 87	− 96	+ 183
Asbestos	5,553	8,741	4,906	+ 647	− 3,188	+ 3,835
Chromite	12	15	56	− 44	− 3	− 41
Coal	65,518	72,932	72,452	− 6,934	− 7,414	+ 480
Feldspar	248	216	231	+ 17	+ 32	− 15
Fluorspar	102	102	136	− 34	-	− 34
Graphite	31	57	66	− 35	− 26	− 9
Grindstones	44	50	64	− 20	− 6	− 14
Gypsum	2,161	1,403	1,786	+ 375	+ 758	− 383
Magnesite	76	59	81	− 5	+ 17	− 22
Magnesium sulphate	24	19	39	− 15	+ 5	− 20
Mica	152	334	70	+ 82	− 182	+ 264
Mineral pigments–Barytes	10	10	10	-	-	-
–Oxides	111	73	94	+ 17	+ 38	− 21
Natural gas	5,847	4,792	4,594	+ 1,253	+ 1,055	+ 198
Petroleum	611	611	642	− 31	-	− 31
Pyrites	74	65	116	− 42	+ 9	− 51
Quartz	209	344	313	− 104	− 135	+ 31
Salt	1,628	1,846	1,674	− 46	− 218	+ 172
Talc	188	188	144	+ 44	-	+ 44
Other articles	57	85	134	− 77	− 28	− 49
Total non-metallic $	**82,977**	**92,359**	**87,842**	**− 4,865**	**− 9,382**	**+ 4,517**
Structural Materials and Clay Products.						
Cement, Portland	15,438	17,082	14,195	+ 1,243	− 1,644	+ 2,887
Brick, common	4,715	4,691	3,568	+ 1,147	+ 24	+ 1,123
Brick, pressed	1,840	1,945	1,738	+ 102	− 105	+ 207
Brick, moulded and ornamental	866	1,267	51	+ 815	− 401	+ 1,216
Fireproofing	543	346	452	+ 91	+ 197	− 106
Sewerpipe	1,766	1,124	1,667	+ 99	+ 642	− 543
Tile, drain	407	255	474	− 67	+ 152	− 219
Other clay products	784	499	908	− 124	+ 285	− 409
Lime	3,165	3,097	2,781	+ 384	+ 68	+ 316
Sand and gravel	3,503	2,556	2,537	+ 966	+ 947	+ 19
Other articles	6,508	4,142	6,366	+ 142	+ 2,366	− 2,224
Total Structural Materials and Clay Products $	**39,535**	**37,004**	**34,737**	**+ 4,798**	**+ 2,531**	**+ 2,267**
Grand Totals $	**184,298**	**187,411**	**171,922**	**+12,376**	**− 3,113**	**+ 15,489**

Provincial Distribution of Mineral Production.

The principal mineral producing province of Canada in 1922 was Ontario, with an output valued at $65,866,029. British Columbia came second with a mineral production valued at $39,423,962. Alberta was third with $27,872,136 and Nova Scotia ranked fourth with $25,923,499. Quebec was fifth with $17,646,529 and New Brunswick, Manitoba, Yukon Territory and Saskatchewan followed in the order named, with productions of between one and three million dollars each.

4.—Mineral Production of Canada, by Provinces, 1899 to 1922.

Calendar Years.	Nova Scotia.[1]	New Brunswick.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	Yukon.	British Columbia.
	$	$	$	$	$	$	$	$	$
1899....	6,817,274	420,227	2,585,635	9,819,557		17,108,707			12,482,605
1900....	9,298,479	439,060	3,292,383	11,258,099		23,452,330			16,680,526
1901....	7,770,159	467,985	3,759,984	13,970,010		19,297,940			20,531,833
1902....	10,686,549	607,129	3,743,636	14,619,091		16,127,400			17,448,031
1903....	11,431,914	580,495	3,585,938	14,160,033		14,082,986			17,899,147
1904....	11,212,746	559,913	3,688,482	12,582,843		12,713,613			19,325,174
1905....	11,507,047	559,035	4,405,975	18,833,292		11,387,642			22,386,008
1906....	12,894,303	646,328	5,242,058	25,111,682		10,092,726			25,299,600
1907....	14,532,040	664,467	6,205,553	30,381,638	898,775	533,251	4,657,524	3,335,898	25,656,056
1908....	14,487,108	579,816	6,372,949	30,623,812	584,374	413,212	5,122,505	3,669,290	23,704,035
1909....	12,504,810	657,035	7,086,265	37,374,577	1,193,377	456,246	6,047,447	4,032,678	22,479,006
1910....	14,195,730	581,942	8,270,136	43,538,078	1,500,359	498,122	8,996,210	4,764,474	24,478,572
1911....	15,409,397	612,830	9,304,717	42,796,162	1,791,772	636,706	6,662,673	4,707,432	21,299,305
1912....	18,922,236	771,004	11,656,998	51,985,876	2,463,074	1,165,642	12,073,589	5,933,242	30,076,635
1913....	19,376,183	1,102,613	13,475,534	59,167,749	2,214,496	881,142	15,054,046	6,276,737	28,086,312
1914....	17,584,639	1,014,570	11,836,929	53,034,677	2,413,489	712,313	12,684,234	5,418,185	24,164,039
1915....	18,088,342	903,467	11,619,275	61,071,287	1,318,387	451,933	9,909,347	5,057,708	28,689,425
1916....	20,042,262	1,118,187	14,406,598	80,461,323	1,823,576	590,473	13,297,543	5,491,610	39,969,962
1917....	21,104,542	1,435,024	17,400,077	89,066,600	2,628,264	860,651	16,527,535	4,482,202	36,141,926
1918....	22,317,108	2,144,017	12,605,347	94,694,093	3,120,600	1,019,781	23,109,987	2,355,631	42,935,333
1919....	23,445,215	1,770,945	21,267,947	67,917,998	2,868,378	1,521,964	21,087,582	1,940,934	34,865,427
1920....	34,130,017	2,491,787	28,886,214	81,715,808	4,223,461	1,837,468	33,586,456	1,576,726	39,411,728
1921....	28,912,111	1,901,505	15,157,094	57,356,651	1,934,117	1,114,220	30,562,229	1,754,955	33,230,460
1922....	25,923,499	2,263,692	17,646,529	65,866,029	2,258,942	1,255,470	27,872,136	1,785,573	39,423,962

[1]Includes a small production from Prince Edward Island.

5.—Mineral Production of Nova Scotia, 1920, 1921 and 1922.

Products.		1920.		1921.		1922.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Metallic.			$		$		$
Gold	fine oz.	690	14,263	440	9,075	1,042	21,540
Silver	"	–	–	25	16	86	58
Non-metallic.							
Barytes	tons	751	22,983	270	9,567	289	9,537
Coal	"	6,429,291	32,238,129	5,734,928	27,782,050	5,569,072	24,629,921
Feldspar	"	–	–	16	177	–	–
Grindstones	"	211	8,440	183	6,990	102	3,692
Gypsum	"	260,661	573,752	206,831	511,883	332,404	580,148
Manganese	"	62	4,140	68	3,400	73	2,044
Salt	"	3,023	32,000	2,638	23,269	5,053	54,666
Tripolite	"	260	8,600	341	11,268	219	5,781
Structural Materials and Clay Products.							
Lime	bush.	201,500	40,300	25,914	6,085	–	–
Stone	tons.	–	420,175	58,923	116,602	87,955	119,492
Other products	$	–	226,121	–	431,789[1]	–	496,620
Total	**$**	–	**34,130,017**	–	**28,912,111**	–	**25,923,499**

The total production of blast furnace pig-iron in Nova Scotia in 1920 was 332,493 tons, valued at $7,687,614; in 1921, it was 169,504 tons, valued at $3,633,516 and in 1922 the production was 135,261 tons, valued at $3,139,994.

[1]Includes railway ballast from P.E.I., valued at $1,433.

6.—Mineral Production of New Brunswick, 1920, 1921 and 1922.

Products.	1920.		1921.		1922.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		$		$		$
Non-metallic.						
Coal..... tons.	166,048	1,055,286	187,192	920,666	287,513	1,107,643
Grindstones..... "	2,233	79,696	1,098	57,077	903	40,050
Gypsum..... "	49,405	428,183	54,030	360,220	82,462	517,668
Natural gas.....M. cu ft.	682,502	130,506	708,743	139,375	753,898	148,040
Petroleum..... brl.	5,148	19,963	7,479	33,022	7,778	32,732
Structural materials.						
Clay products..... $	–	73,484	–	66,600	–	75,425
Lime..... bush.	701,859	365,030	562,447	203,084	560,834	187,895
Stone..... tons.	–	280,167	15,125	97,290	12,027	104,730
Other products..... $	–	59,472	–	24,171	–	49,509
Total..... $	–	**2,491,787**	–	**1,901,505**	–	**2,263,692**

7.—Mineral Production of Quebec, 1920, 1921 and 1922.

Products.	1920.		1921.		1922.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		$		$		$
Metallic.						
Copper..... lb.	880,638	153,724	352,308	44,045	–	–
Gold..... ozs.	955	19,742	635	13,127	–	–
Iron ore sold for export. tons	960	3,000	–	–	526	1,410
Lead..... lb.	905,472	80,949	595,881	34,215	–	–
Molybdenite..... "	–	–	–	–	–	–
Silver..... ozs.	61,003	61,552	38,084	23,861	–	–
Zinc..... lb.	1,120,200	85,931	–	–	–	–
Non-metallic.						
Asbestos and asbestic. tons	199,573	14,792,201	92,761	4,906,230	163,706	5,552,723
Chromite..... "	11,016	251,379	2,798	55,696	767	11,503
Feldspar..... "	649	10,052	9,737	80,180	12,472	127,826
Graphite..... "	233	31,913	38	2,423	24	1,500
Magnesite..... "	18,378	512,756	2,927	74,109	2,849	76,294
Mica ..... "	–	281,460	484	41,172	1,360	97,748
Mineral water..... gal.	24,219	10,109	19,626	7,278	12,161	3,692
Iron oxides..... tons	19,128	157,909	8,879	92,765	7,282	110,488
Peat..... "	–	–	–	–	–	–
Phosphate..... "	–	–	30	450	131	1,320
Pyrites..... "	14,817	44,451	1,986	10,463	–	–
Quartz..... "	1,986	5,558	5,994	29,824	10,994	53,023
Talc..... "	150	1,050	–	–	150	4,950
Structural Materials and Clay Products.						
Cement..... brl.	3,013,463	6,545,054	2,135,631	5,410,275	2,660,935	5,907,300
Clay products..... $	–	2,361,007	–	1,742,872	–	2,476,370
Kaolin..... tons	683	15,022	124	1,888	1,197	17,866
Lime..... bush.	2,108,203	826,044	2,040,451	790,503	2,108,513[4]	634,157
Slate.....squares	[1]	14,200	[2]	22,325	1,899[5]	14,871
Stone..... tons	–	2,189,325	719,499	1,662,641	987,355	2,342,316
Other products..... $	–	431,826	700,669[3]	110,752	–	212,582
Total..... $	–	**28,886,214**	–	**15,157,094**	–	**17,647,939**

NOTE.—In Quebec there is also an important production of aluminium from imported ores.

[1] 1,532 squares and 240 tons of crushed material.
[2] 415 squares and 2,232 tons of crushed material.
[3] Sand and gravel only in 1921.
[4] The production of hydrated lime was 5,278 tons, valued at $55,642.
[5] Tons.

8.—Mineral Production of Ontario, 1920, 1921 and 1922.

Products.	1920.		1921.		1922.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Metallic.		$		$		$
Cobalt, metallic and in oxide..... lb.	546,023	1,365,058	251,986	755,958	569,960	1,852,370
Copper..... "	32,059,993	5,596,392	12,821,385	1,602,930	10,943,636	1,464,477
Gold..... ozs.	564,995	11,679,483	708,213	14,640,062	1,000,340	20,678,862
Iron ore, sold for export. tons	6,683	54,266	48	242	-	-
Iron, pig, from Canadian ore[1]..... "	75,869	2,066,997	56,564	1,873,682	8,095	178,980
Lead..... lb.	2,255,520	201,643	3,312,493	190,203	2,890,397	180,216
Nickel..... "	61,335,706	24,534,282	19,293,060	6,752,571	17,597,123	6,158,993
Platinum.....crude ozs.	578	36,961	269	20,184	458	44,709
Palladium..... "	913	58,392	591	38,267	724	47,060
Rhodium, ruthenium, osmium..... "	513	31,815	57	9,690	391	31,280
Silver.....ozs.	9,907,626	9,996,795	9,761,607	6,116,037	10,811,903	7,300,305
Zinc..... lb.	13,950	1,070	-	-	-	-
Non-metallic.						
Actinolite..... tons	100	1,160	78	975	50	575
Arsenious oxide..... "	1,831	425,617	1,491	233,763	2,058	299,940
Corundum..... "	196	24,547	403	55,965	-	-
Feldspar..... "	37,224	270,843	20,115	150,457	10,842	120,576
Fluorspar..... "	3,758	68,475	116	1,744	284	3,905
Graphite..... "	1,957	133,704	899	63,439	573	29,853
Gypsum..... "	74,707	404,162	84,790	433,053	110,227	621,668
Mica..... "	1,466	94,562	218	28,891	1,989	54,515
Mineral water.....imp. gal.	-	14,473	308,647	14,438	209,072	10,528
Natural gas.....M. cu ft.	10,529,374	2,920,731	8,422,774	3,080,130	8,060,114	4,076,296
Peat..... tons	4,550	18,650	1,666	6,664	3,000	14,500
Petroleum..... brl.	180,071	726,286	172,859	559,198	164,732	526,316
Phosphate..... tons	-	-	-	-	59	476
Pyrites..... "	148,652	618,283	27,785	101,306	11,233	39,763
Quartz..... "	90,433	321,063	72,068	220,806	81,528	118,054
Salt..... "	206,832	1,512,724	161,987	1,649,626	176,741	1,573,657
Strontium..... "	75	2,625	-	-	-	-
Talc..... "	21,411	162,784	9,967	140,390	12,854	178,728
Structural Materials and Clay Products.						
Cement..... brl.	2,035,594	4,377,814	2,723,071	6,424,356	3,104,386	6,393,566
Clay products..... $	-	5,613,488	-	5,183,125	-	6,944,218
Lime.....bush.	5,109,635	1,962,086	3,530,547	1,344,188	3,939,954[3]	1,311,563[3]
Sand-lime brick..... no.	30,664,720	451,175	-	-	-	-
Stone..... tons	-	4,035,478	2,716,080	4,167,582	2,317,265	2,969,926
Other products..... $	-	1,931,924	-	1,496,729[2]	-	2,640,154
Total..... $	-	**81,715,808**	-	**57,356,651**	-	**65,866,029**

[1] The total production of blast-furnace pig-iron in Ontario in 1920 was 749,068 tons, valued at $22,252,062; in 1921, 494,901 tons, valued at $11,856,352; and in 1922 the production was 293,662 tons, valued at $6,493,513.
[2] Sand and gravel only in 1921 (6,273,173 tons).
[3] The production of hydrated lime was 36,408 tons, valued at $455,980.

9.—Mineral Production of Manitoba, 1920, 1921 and 1922.

Products.	1920.		1921.		1922.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Metallic.		$		$		$
Copper..... lb.	3,062,577	534,604	–	–	–	–
Gold..... ozs.	781	16,145	207	4,279	156	3,225
Silver..... "	15,510	15,649	33	20	20	14
Non-metallic.						
Gypsum, calcined..... tons	44,371	487,894	40,859	480,282	34,072	440,914
Natural gas.....M cu. ft.	200	60	200	60	200	60
Structural Materials and Clay Products.						
Clay products..... $	–	206,764	–	208,982	–	210,740
Lime.....bush.	605,399	210,984	413,283	136,375	382,184	163,799
Sand-lime brick[1]..... No.	10,278,802	197,734	–	–	–	–
Stone..... tons	–	374,286	16,868	56,666	34,359	106,638
Other products..... $	–	2,179,341	–	1,047,453	–	1,333,552
Total..... $	–	4,223,461	–	1,934,117	–	2,258,942

10.—Mineral Production of Saskatchewan, 1920, 1921, and 1922.

Products.	1920.		1921.		1922.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Non-metallic.		$		$		$
Coal..... tons	343,475	819,320	335,632	823,180	382,437	802,053
Magnesium sulphate.... "	2	103	2	120	–	–
Salt..... "	–	–	33	790	–	–
Sodium sulphate..... "	811	19,496	624	18,850	504	11,980
Structural Materials and Clay Products.						
Clay products..... $	–	471,448	–	166,244	–	134,704
Sand-lime brick[1]..... No.	2,258,500	35,383	–	–	–	–
Other products..... $	–	491,718	–	105,036	–	306,733
Total..... $	–	**1,837,468**	–	**1,114,220**	–	**1,255,470**

11.—Mineral Production of Alberta, 1920, 1921 and 1922.

Products.	1920.		1921.		1922.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Metallic.		$		$		$
Gold, alluvial..... ozs.	–	–	49	1,013	–	–
Non-metallic.						
Coal..... tons	6,833,500	29,849,608	5,909,217	27,246,514	5,990,911	24,351,913
Natural gas.....M cu. ft.	5,633,442	1,181,345	4,945,884	1,374,599	5,867,459	1,622,105
Petroleum..... brl.	11,032	75,986	7,203	49,313	5,608	52,128
Structural Materials and Clay Products.						
Clay products..... $	–	786,430	–	710,477	–	700,063
Lime.....bush.	139,433	72,477	107,083	48,332	130,627	71,328
Sand-lime brick[1]..... no.	2,257,000	40,626	–	–	–	–
Stone..... tons	–	4,415	2,962	13,750	554	7,300
Other products..... $	–	1,575,569	–	1,118,231	–	1,067,299
Total..... $	–	**33,586,456**	–	**30,562,229**	–	**27,872,136**

[1]Sand-lime brick not included under Mineral Production in 1921 and 1922.

12.—Mineral Production of British Columbia, 1920, 1921 and 1922.

Products.	1920.		1921.		1922.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Metallic.		$		$		$
Copper[1] lbs.	45,319,771	7,911,019	34,447,127	4,306,580	31,936,182	4,273,700
Gold ozs.	124,808	2,580,010	150,792	3,117,147	207,370	4,286,718
Iron ore sold for export tons	1,212	7,272	1,010	3,030	1,255	3,528
Lead lbs.	32,792,725	2,931,670	60,298,603	3,462,346	87,093,266	5,430,265
Platinum ozs.	17	719	23	1,726	12	1,154
Silver "	3,327,028	3,356,971	3,350,357	2,099,133	7,150,937	4,828,384
Zinc lbs.	38,729,762	2,970,960	53,089,356	2,471,310	56,290,000	3,217,536
Non-metallic.						
Arsenic tons	628	22,231	–	–	518	21,097
Coal "	2,858,877	16,726,950	2,890,291	15,676,774	2,927,033	14,622,317
Fluorspar "	7,477	171,971	5,403	134,523	4,219	98,233
Gypsum "	–	–	40	100	100	500
Manganese "	587	6,889	–	–	–	–
Magnesium sulphate "	1,945	39,783	2,027	39,386	1,021	24,017
Magnesite "	–	–	803	7,211	–	–
Mineral water gals.	–	–	–	–	–	–
Natro-alunite tons	–	–	30	1,500	50	2,500
Oxides (iron) "	–	–	169	845	3	120
Pyrites "	11,275	56,376	3,597	4,557	6,908	34,540
Quartz "	35,876	141,200	22,288	62,317	17,425	37,521
Sodium carbonate "	–	–	197	14,775	202	3,027
Talc "	110	3,100	167	4,175	191	4,780
Structural Materials and Clay Products.						
Clay products $	–	596,172	–	415,869	–	447,452
Lime bush.	561,305	341,632	199,341	252,630	433,716[2]	254,320
Stone tons	–	276,505	142,041	229,165	197,670	324,591
Other products $	–	1,270,298	–	925,361	–	1,507,662
Total $	–	**39,411,728**	–	**33,230,460**	–	**39,423,962**

[1] Smelter recoveries of copper.
[2] The production of hydrated lime in addition was 2,909 tons, valued at $30,321.

13.—Mineral Production of Yukon, 1920, 1921 and 1922.

Products.	1920.		1921.		1922.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Metallic.		$		$		$
Copper lbs.	277,712	48,478	–	–	–	–
Gold ozs.	72,778	1,504,455	65,994	1,364,217	54,456	1,125,705
Silver "	19,190	19,363	393,092	246,288	663,493	447,997
Lead lbs.	–	–	2,472,615	141,978	3,323,508	207,221
Non-metallic.						
Coal tons	763	4,430	233	2,472	465	4,650
Total $	–	**1,576,762**	–	**1,754,955**	–	**1,785,573**

2.—Metallic Minerals.

1.—Gold.

Canada has been a gold producing country for over 60 years. The discovery of gold in paying quantities was an epoch-making event in the history of British Columbia. In the late fifties, placer gold was discovered along the Thompson river, and in 1858 the famous Fraser river rush took place, attracting the attention of the mining world to British Columbia. The extraordinarily rich deposits of Williams and Lightning creeks in the Cariboo district were discovered in 1860, and three years later the area had a record production of placer gold valued at $4,000,000. In the northern part of the province, the Atlin division of the Cassiar district was discovered in 1892.

The discovery of gold in the Yukon river was reported in 1869, and bar mining on the tributaries of the Yukon was conducted with increasing profit between 1881 and 1886. Ten years later rich discoveries were made in creeks of the Klondike river, a right bank tributary joining the Yukon at what is now Dawson City; and one of the greatest rushes in history was made to this locality. The richest streams in the district were Bonanza creek and its principal tributary, the Eldorado.

Gold was discovered in Nova Scotia in 1860. Two years after the discovery, gold valued at nearly $142,000 was recovered from the quartz veins; a steady, though in recent years declining, output has been reported since that time.

Although gold was first discovered during 1866 in Hastings county, no permanent gold industry was established in Ontario until recent years. Gold has been found and worked at many points in Ontario from the Lake of the Woods in the west to the Hastings district in the east, a distance of roughly 650 miles. The gold production of the province during the last decade has increased greatly, the Porcupine area having been the principal producer since 1912.

Gold production in Canada attained its maximum in 1900, when the Yukon production reached its highest point, and 1,350,057 ounces of fine gold were produced. For the provinces the years in which the greatest yields were obtained were as follows:—Nova Scotia, 1902; Quebec, 1881; Ontario, 1922; Alberta, 1896; and British Columbia, 1913. The quantity and value of gold produced in Canada is given for 1911 and subsequent years in Tables **14** and **15.**

14.—Quantity of Gold produced in Canada, by Provinces, calendar years 1911-1922.

Years.	Nova Scotia.	Quebec.	Ontario.	Manitoba.	Alberta.	British Columbia.	Yukon Territory.	Total.
	Oz. fine.	Oz. fine.	Oz. fine.	Oz. fine.	Oz. fine.	Oz. fine.	Oz. fine.	Oz. fine.
1911	7,781	613	2,062	–	10	238,496	224,197	473,159
1912	4,385	642	86,523	–	73	251,815	268,447	611,885
1913	2,174	701	219,801	–	–	297,459	282,838	802,973
1914	2,904	1,299	268,264	–	48	252,730	247,940	773,178
1915	6,636	1,099	406,577	–	195	273,376	230,173	918,056
1916	4,562	1,034	492,481	–	82	219,633	212,700	930,492
1917	2,210	1,511	423,261	440	–	133,742	177,667	738,831
1918	1,176	1,939	411,976	1,926	27	180,163	102,474	699,681
1919	850	1,470	505,739	724	24	167,252	90,705	766,764
1920	696	955	564,995	781	–	124,868	72,778	765,007
1921	439	635	708,213	207	49	150,792	65,994	926,329
1922	1,042	–	1,000,340	156	–	207,370	54,456	1,263,364

NOTE.—For the years 1862 to 1910, see Canada Year Book, 1916-17, pp. 268 and 269.

15.—Value of Gold produced in Canada, by Provinces, calendar years 1911-1922.

Years.	Nova Scotia.	Quebec.	Ontario.	Manitoba.	Alberta.	British Columbia.	Yukon Territory.	Total.
	$	$	$	$	$	$	$	$
1911	160,854	12,672	42,625	–	207	4,930,145	4,634,574	9,781,077
1912	90,638	13,270	1,788,596	–	1,509	5,205,485	5,549,296	12,648,794
1913	44,935	14,491	4,543,690	–	–	6,149,027	5,846,780	16,598,923
1914	60,031	26,708	5,545,509	–	992	5,224,393	5,125,374	15,983,007
1915	137,180	22,720	8,404,693	–	4,026	5,651,184	4,758,098	18,977,901
1916	94,365	21,375	10,180,485	–	1,695	4,540,216	4,396,900	19,234,976
1917	45,685	31,235	8,749,581	9,095	–	2,764,693	3,672,703	15,272,992
1918	24,310	40,083	8,516,299	139,638	558	3,624,476	2,118,325	14,463,689
1919	17,571	36,388	10,454,553	14,966	500	3,457,406	1,875,039	15,850,423
1920	14,263	19,742	11,679,483	16,145	–	2,580,010	1,504,455	15,814,098
1921	9,075	13,127	14,640,062	4,279	1,013	3,117,147	1,364,217	19,148,920
1922	21,540	–	20,678,862	3,225	–	4,286,718	1,125,705	26,116,050

NOTE.—For the years 1862 to 1910, see Canada Year Book, 1916-17, p. 270.

With the exception of the years 1891 and 1893, when its output was surpassed by that of Nova Scotia, British Columbia maintained its position as the chief gold-producer for a period of thirty-nine years, or up to 1897, when its production was outstripped by that of the Yukon. The latter district held first place until 1907, when British Columbia regained the first rank. During the next seven years British Columbia continued to lead with the exception of 1912, when the Yukon was again in the ascendancy. With the development of the Porcupine and contiguous areas, Ontario passed the other provinces and mining districts in 1914 and still holds the first place, so far as the production of gold is concerned.

Ontario.—In spite of the discovery of gold in various parts of the province, the production of the metal was comparatively small until 1912, when the first permanent camp was established in the Porcupine area. The total recorded production of gold in Ontario for the period 1887-1912 was 210,040 fine ounces, of which more than 40 per cent was obtained in the year 1912. The production rose from 219,801 fine ounces in 1913 to 492,481 fine ounces in 1916, but fell during the next two years, owing to scarcity of labour. The yield rose to 1,000,340 fine ounces in 1922 and preliminary figures for later months indicate that production has been well maintained.

Porcupine Area.—The Porcupine district, the most important gold mining area of Canada, lies about 150 miles northwest of Cobalt, the present productive portion being limited to the township of Tisdale with an area six miles square.

The gold deposits seem to be generically related to the porphyries which have intruded the older Keewatin greenstones and also the Timiskaming sediments. Rocks of these series are widely distributed throughout the Porcupine district and it is in them that the gold bearing deposits are found. The theory of deposition is that the intrusion of porphyry fissured the older rocks and opened a way for the circulation of the mineral-bearing siliceous solution which filled the fissures. The use of this theory in guiding the search for new ore bodies has been attended with great success.

The ore bodies themselves are generally lens-shaped fissures filled with quartz veinlets and other highly siliceous matter. Iron pyrite is always present. Mineralized schist on the walls of the veins invariably carries gold values, and as much of this as it is profitable to work is broken down. The irregularity of the ore bodies

requires a tremendous amount of sampling before breaking ore. The lenses are of irregular shape, varying from only a few feet in length and width to hundreds of feet in length and as much as 30 or 40 feet in breadth. There are also irregular dome-like masses of quartz which are roughly elliptical or oval in surface outline.

Ordinarily from 95 to 97 p.c. of the gold in the ores mined at the Porcupine field is extracted chemically by dissolving it in a weak solution of sodium cyanide, the details of the process varying at the different mines. There are five steps in the cyanide process which are briefly as follows: (1) reducing the ore to a size where the gold particles are freed from enclosing rock, carried to a point where the ore is ground about as fine as cement, (2) dissolving the gold in sodium cyanide solution, (3) separating the solution containing the dissolved gold from the impoverished ore, (4) precipitation of gold from solution by zinc dust, and (5) refining of the precipitates.

The reduction of the ore at the Hollinger is performed in four steps: (1) crushing in gyratories, (2) further reduction in rolls to a size of 1″, (3) further reduction in stamps or ball or rod mills, (4) final grinding in tube mills. There are at present 200 stamps, 1 ball mill, 1 rod mill and 24 tube mills in operation. The tonnage treated daily is 4,500 tons. Danish flint pebbles are used in the tube mills for fine grinding, but recent experiments are likely to lead to the use of balls instead of pebbles. At the Hollinger, Dome and McIntyre mines, the zinc precipitates are refined before being sent to the Mint at Ottawa.

Kirkland Lake.—Of the other gold-producing localities, Kirkland lake in Timiskaming district has been the most important. The first gold discovery in the vicinity of Kirkland lake was made in 1911 on a claim now forming part of the Wright-Hargreaves mine. The geological formation is similar, as regards age relationship to that of the Porcupine district. The rocks are pre-Cambrian, the Keewatin predominating. Unlike the Porcupine, most of the productive veins are found within the porphyry, which is of a syenitic variety. Three principal zones of mineralization have been indicated by exploration: (1) the main or central zone, which runs in a north-easterly direction along the southern expanse of the lake, and along which a group of important mines is being developed over a length of 2¼ miles and a width of half a mile; (2) a southerly zone which lies about three-quarters of a mile to the south; and (3) a northerly zone known as the Goodfish Lake gold area.

British Columbia.—The production of gold in British Columbia has varied considerably at different periods. Rapid increases took place between 1858 and 1863, when 189,318 fine ounces were won by placer mining. Thereafter a decline occurred until 1893, when a low level of 18,360 fine ounces was reached. Then the introduction of lode mining resulted in a rapidly increasing production until 1902, when previous records were surpassed by an output of more than 288,000 fine ounces. With the exception of the maximum output of 297,459 fine ounces in 1913, the record of 1902 has not been equalled. Recent developments including the increase of 17.8 p.c. in the production of 1922 over that of 1921 indicate more favourable conditions in the gold mining industry of the province. Though the bulk of the gold obtained in the Cordilleran region has been derived from the placer deposits of the central portion of the region from the Klondike on the north almost to the international boundary on the south, yet a large amount, averaging 178,039 fine ounces between 1913 and 1921, was obtained by lode mining, largely of the copper-gold ores of the Rossland and Yale-boundary districts. The metals recovered from the Rossland ores are gold, silver and copper, with gold the most important.

The gold content of the ore mined has remained fairly constant since 1907 at 0.44 ounces per ton. The more important mines, including the Le Roi Centre Star group, are directly owned or controlled by the Consolidated Mining and Smelting Company. The boundary district is characterized by the occurrence in enormous masses of low grade copper-sulphide ore with small values of gold. The output of lode gold in the Cassiar district is mainly obtained from the Surf Inlet mine; and the Premier mine in the Salmon River section, which recently joined the list of shippers, was in 1922 the most important producer in British Columbia.

World's Production.—A sketch of the development of the gold mining industry since the discovery of America may take the form of a reference to four successive periods. During the first period, extending from 1493 to 1760, the annual production averaged nearly .34 million fine ounces. The placer mining of Brazil and Colombia swelled the average output of the last sixty years of the period to about .66 million ounces per year.

The production of Russia from placer mining was a considerable factor in the records of the next period, extending from 1761 to 1840, the country retaining first rank among the world's producers until 1837. The annual average production during the period was 5.66 million ounces.

The third period extending from 1841 to 1890 was characterized by the remarkable discovery of gold in California and Australia in 1848 and 1851 respectively. The annual average during the fifty years was 4.94 million ounces. For the first decade the average was 1.7 million ounces and for the second 6.4 million, while the last decade shaded off to 5.1 million. The production of the period was contributed chiefly by the United States, Australia and Russia.

In the fourth period, extending from 1891 to the present time, the outstanding features were the entry of South Africa, an important and then the leading producer, and the phenomenal increase in the output of most of the gold producing countries through the introduction of the cyanide process. The output was 6.3 million fine ounces in 1891, and a steady increase was recorded until 1915, when a maximum of 22.7 million ounces were produced. The activity in many of the large gold-fields having declined after 1915, a decreasing output was recorded for each year between 1915 and 1921, the production of the latter year being nearly 16 million ounces. The Anglo-Boer war caused the only serious recession in the output of South Africa between 1888 and 1916, when the record yield of nearly 9.3 million fine ounces was obtained, this representing 42.3 p.c. of the world's total production of gold in that year. The output in 1921 was slightly in excess of 9 million ounces, forming 56.6 p.c. of the world's production.

The yield of gold in the United States is derived from placer mining, gold quartz mining and milling, and recoveries at copper and other base metal refineries. The maximum output was attained in 1915, when 4.89 million ounces were produced, the output in 1921 dropping to 2.42 million ounces, owing chiefly to the fact that the price of gold in the country remained fixed throughout the period while higher operating costs obtained.

Canada occupied in 1921, the third place among the world's gold producers, the output being 926,329 fine ounces or 5.8 p.c. of the total production of the year. The same relative position was retained in 1922, and the percentage, according to preliminary estimates, increased to 8.2, the Canadian production being 1,263,364 fine ounces as compared with the world estimate of 15,364,650 fine ounces.

For detailed statistics of the gold production of the world for 1920 and 1921, see Table **16** of this section.

16.—Quantity and Value of the World's Production of Gold and Silver for calendar years 1920 and 1921.

(From the Annual Report of the Director of the United States Mint.)

Countries.	1920.				1921.			
	Gold.		Silver.		Gold.		Silver.	
	fine oz.	$	fine oz.	$	fine oz.	$	fine oz.	$
North America—								
United States...	2,476,166	51,186,900	55,361,573	56,435,587	2,422,006	50,067,307	53,052,441	33,485,109
Canada.....	766,913	15,853,499	12,793,541	13,041,736	926,329	19,148,920	13,543,198	8,485,355
Mexico.....	738,485	15,265,850	66,662,253	67,955,501	688,846	14,239,711	64,513,540	40,719,011
Total.....	**3,981,564**	**82,306,249**	**134,817,367**	**137,432,824**	**4,037,181**	**83,455,938**	**131,109,179**	**82,689,475**
Central American States and West Indies.....	145,125	3,000,000	2,700,000	2,752,380	120,937	2,500,000	2,000,000	1,262,340
South America—								
Argentina.....	4,837	100,000	30,000	30,582	3,628	75,000	25,000	15,779
Bolivia.....	242	5,000	2,200,000	2,242,680	290	6,000	2,400,000	1,514,808
Brazil.....	125,775	2,600,000	30,000	30,582	134,482	2,780,000	33,000	20,829
Chile.....	43,538	900,000	2,604,456	2,654,982	38,700	800,000	2,200,000	1,388,574
Colombia.....	280,575	5,800,000	480,000	489,312	290,250	6,000,000	500,000	315,585
Ecuador.....	36,281	750,000	35,000	35,679	37,710	779,536	40,000	25,247
Guiana—								
British.....	9,675	200,000			12,828	265,178		
Dutch.....	12,506	258,522	8,000	8,155	12,094	250,000	9,000	5,680
French.....	43,538	900,000			48,375	1,000,000		
Peru.....	62,757	1,297,302	9,196,282	9,374,690	77,385	1,599,690	9,853,910	6,219,493
Uruguay.....	21	440	500	510	339	7,000	2,000	1,262
Venezuela.....	18,839	389,436	3,500	3,568	11,215	231,834	2,700	1,704
Total.....	**638,584**	**13,200,700**	**14,587,738**	**14,870,740**	**667,296**	**13,794,238**	**15,065,610**	**9,508,961**
Europe—								
Austria.....	–	–	13,985	14,256	–	–	15,000	9,468
Czecho-Slovakia	8,761	181,106	680,069	693,262	11,413	235,927	703,656	443,748
France.....	–	–	321,500	327,737	–	–	321,500	202,921
Germany.....	4,437	91,715	3,305,020	3,369,138	4,501	93,044	3,375,750	2,130,672
Great Britain....	32	661	76,356	77,837	–	–	11,317	7,142
Greece.....	514	10,625	220,935	225,220	482	9,964	192,900	121,753
Italy.....	725	15,000	297,452	303,223	484	10,000	199,330	125,811
Norway.....	–	–	323,172	329,442	–	–	323,172	203,977
Russia and Siberia.....	57,225	1,182,945	50,000	50,970	45,000	930,232	40,000	25,247
Spain.....	–	–	2,956,546	3,013,903	–	–	2,679,349	1,691,194
Sweden.....	225	4,651	11,574	11,799	193	3,988	13,342	8,421
Turkey.....	–	–	100,000	101,940	–	–	100,000	63,117
Yugoslavia.....	3,215	66,460	15,000	15,291	3,986	82,410	15,946	10,065
Total.....	**75,134**	**1,553,163**	**8,371,609**	**8,534,018**	**66,059**	**1,365,565**	**7,990,662**	**5,043,466**
Australasia—								
New South Wales.....	48,907	1,010,997	1,195,821	1,219,020	51,173	1,057,840	8,326,006	5,255,125
Northern Territory.....	751	15,525	–	–	490	10,129	–	–
Queensland.....	115,230	2,382,016	274,935	279,555	40,376	834,646	195,328	123,285
South Australia.	1,697	35,080	1,005	1,025	2,698	54,326	1,449	915
Victoria.....	168,979	3,493,106	6,231	6,352	104,512	2,160,455	5,204	3,285
West Australia...	617,842	12,771,928	130,692	133,227	664,950	13,745,736	116,151	73,311
New Zealand....	124,375	2,571,055	453,567	462,366	124,375	2,571,055	453,567	286,278
Tasmania.....	6,246	129,116	623,359	635,452	5,340	110,388	348,658	220,062
Papua.....	11,751	242,915	–	–	9,289	192,021	–	–
Total.....	**1,095,778**	**22,651,738**	**2,684,914**	**2,736,997**	**1,003,133**	**20,736,596**	**9,446,363**	**5,962,261**

16.—Quantity and Value of the World's Production of Gold and Silver for calendar years 1920 and 1921—concluded.

(From the Annual Report of the Director of the United States Mint.)

Countries.	1920.				1921.			
	Gold.		Silver.		Gold.		Silver.	
	fine oz.	$	fine oz.	$	fine oz.	$	fine oz.	$
Asia—								
British India	499,068	10,316,651	2,870,595	2,926,285	470,000	9,715,762	3,827,904	2,416,058
China	125,000	2,583,979	50,000	50,970	100,000	2,067,183	40,000	25,247
Chosen (Korea)	76,000	1,571,059	1,200	1,223	75,000	1,550,388	1,000	631
East Indies—								
British	29,025	600,000	–	–	24,188	500,000	–	–
Dutch	90,920	1,879,483	1,027,932	1,047,874	94,168	1,946,625	1,021,994	645,052
Federated Malay States	12,853	265,695	–	–	13,386	276,719	–	–
Indo-China	160	3,307	–	–	160	3,307	–	–
Japan	248,181	5,130,357	4,892,380	4,987,292	229,671	4,747,721	3,993,981	2,520,881
Sarawak	16,353	338,047	5,179	5,279	17,091	353,302	3,437	2,169
Taiwan (Formosa)	13,500	279,070	20,000	20,388	12,000	248,062	15,000	9,468
Total	**1,111,060**	**22,967,648**	**8,867,286**	**9,039,311**	**1,035,664**	**21,409,069**	**8,903,316**	**5,619,506**
Africa—								
Algeria	–	–	150,000	152,910	18,936	391,442	150,000	94,675
Belgian Congo	96,804	2,001,116	10,673	10,881	65,715	1,358,450	5,819	3,673
British West Africa—								
Gold Coast, Ashanti and Nigeria	230,948	4,774,119	–	–	203,599	4,208,765	–	–
Egypt and Abyssinia	14,232	294,202	304	310	1,451	30,000	–	–
Eritrea	579	11,969	–	–	484	10,000	–	–
French West Africa—								
Guinea, Senegal and Ivory Coast	4,838	100,000	–	–	4,838	100,000	–	–
Madagascar	16,686	344,930	13,824	14,093	14,660	303,049	12,860	8,117
Portuguese East Africa	7,256	150,000	700	713	6,015	124,341	502	317
Rhodesia—								
Northern	569	11,762	5,883	5,997	1,383	28,589	8,867	5,597
Southern	552,498	11,421,147	158,982	162,066	585,525	12,103,876	152,989	96,562
Transvaal, Cape Colony and Natal	8,331,651	172,230,512	891,304	908,595	8,128,722	168,035,597	830,339	524,085
Total	**9,256,061**	**191,339,757**	**1,231,670**	**1,255,565**	**9,031,328**	**186,694,109**	**1,161,376**	**733,026**
Total for the World	**16,303,306**	**337,019,255**	**173,260,580**	**176,621,835**	**15,961,598**	**329,955,515**	**175,676,506**	**110,819,035**

2.—Silver.

The annual production of silver in Canada from 1887 to 1894 was less than one million ounces. As a result chiefly of the discovery of the silver-lead ores of British Columbia, it ranged between three and four million ounces from 1895 to 1903. In the latter year silver mining commenced on a small scale in the Cobalt area of Ontario, the output of which rose rapidly to more than 31,500,000 ounces in 1911. In spite of the falling off in the output since that time, Canada still retains its place as the third largest producer of silver in the world.

The silver production of Canada is chiefly credited to the rich silver-cobalt ores of northern Ontario and the silver-lead mines of British Columbia. The phenomenal development of the silver district of Cobalt and Gowganda placed the

region in the first position among the silver camps of the world. An important addition to the output is contributed by the gold-copper ores of British Columbia. A certain amount was also produced until recently by the copper sulphur ores of Quebec. The Yukon has been a steady producer of silver since 1899; its total output until December, 1922, was reported as 3,822,187 ounces.

Ontario.—*Port Arthur.*—The silver mines of the Lake Superior district, while no longer worked on a large scale, were at one time the centre of much activity. The most famous mine, known as the Silver Islet, was abandoned in 1884 after $3,250,000 of silver had been extracted. The district produced silver from 1868 until 1903, when the last mine closed down. Periodical attempts to find new ore-bodies have not met with much success, although some ore was shipped from the district in 1922.

Cobalt.—The silver- bearing veins of Cobalt, lying about 100 miles north of North Bay, were discovered in 1903. The maximum production of the camp was reached in 1911, when 31,507,791 ounces were reported. The output dropped to 8,279,320 ounces in 1921, when the principal producers were as follows:—Nipissing (3,012,614 ounces), O'Brien (1,408,890 ounces), Coniagas (1,301,860 ounces), Mining Corporation (896,637 ounces) and La Rose (658,423 ounces). Most of the ore in the Cobalt area has come from veins or parts of veins that originally lay beneath the diabase sill or in the footwall. Merchantable ore has not been found at as great a distance beneath the sill as above it and unfortunately, little of the hanging wall remains, erosive agencies having removed it together with much of the sill and the footwall. The exploration of the lower contact of the diabase sill, undertaken by the Colonial and Coniagas companies in 1923, may have important results, since the sill extends over a large area.

Gowganda.—Silver was discovered in 1908 near Miller, Calcite and Gowganda lakes in the vicinity of the village of Gowganda, 56 miles to the northwest of Cobalt. The greatest production was in 1917, when 1,064,635 ounces were reported, and the total quantities shipped from 1908 to 1920 were 5,877,592 ounces. The production of silver in the Gowganda area has been chiefly from veins in the diabase and, as far as can be judged at present, mostly from the upper part of the sill where it has been exposed by erosion of the underlying rocks, and also where it dips gently under the underlying rocks as at the Miller Lake O'Brien mine. On the Castle property, worked by the Trethewey Mining Company, the Keewatin over-lies the diabase sill, which is exposed 100 feet west of the silver-bearing vein.

South Lorrain.—The success of the Keeley mine, which is now being developed by an English company, has tended to renew general interest in South Lorrain. The area first attracted attention in 1907, when native silver was discovered on a claim since known as the Keeley mine, and the Wettlaufer in a few years produced more than 3,000,000 ounces of silver.

British Columbia.—Until recently, about 75 p.c. of the metal produced in the province came from the silver-lead-zinc ores of the East and West Kootenay districts. The remainder was chiefly derived from the copper-gold ores of the Rossland, Boundary and Southern Coast districts as well as from the Premier gold mine, near Stewart and the Dolly Varden silver mine at Alice Arm. The Slocan division was by far the largest producer of silver in British Columbia from 1913 to 1920, accounting for nearly 47 p.c. of the total shipments. The total silver yield of the Premier mine in 1921 was 1,200,000 ounces, which was increased to more than 4,000,000 ounces in 1922, while the Dolly Varden mine produced 831,638 ounces in 1920 and 45,647 ounces in the following year.

Yukon Territory.—Production in the Yukon has been obtained chiefly from the gold bullion won by the mining of alluvial deposits. Shipments of high grade silver-lead ores from the Silver King property in the Mayo district accounted for the increase of production from lode mines in 1915 to 1918. The output of the Keno Hill mine of the same district swelled the production in 1921.

World Production of Silver.—The world production of silver was estimated at about 175,676,506 fine ounces for 1921, which is a considerable decline from the pre-war average of 1913, given as 208,690,446 fine ounces. The silver production of Canada in 1922 was 18,581,439 fine ounces, as contrasted with 206,113,246 fine ounces, a preliminary estimate of the world's output for 1922. For the quantity and value of the world's production in 1921, see Table **16** of this section.

Statistics of the quantity and value of silver produced in Canada are given for the years since 1887 in Table 17, while statistics of the quantity and value produced in the various provinces are given for 1911 and subsequent years in Table 18.

17.—Quantity and Value of Silver Produced in Canada during the calendar years 1887-1922.

Years.	Oz.	Value.	Years.	Oz.	Value.	Years.	Oz.	Value.
		$			$			$
1887	355,083	347,271	1899	3,411,644	2,032,658	1911	32,559,044	17,355,472
1888	437,232	410,998	1900	4,468,225	2,740,362	1912	31,955,560	19,440,165
1889	383,318	358,785	1901	5,539,192	3,265,354	1913	31,845,803	19,040,924
1890	400,687	419,118	1902	4,291,317	2,238,351	1914	28,449,821	15,593,631
1891	414,523	409,549	1903	3,198,581	1,709,642	1915	26,625,960	13,228,842
1892	310,651	272,130	1904	3,577,526	2,047,095	1916	25,459,741	16,717,121
1893	–	330,128	1905	6,000,023	3,621,133	1917	22,221,274	18,091,895
1894	847,697	534,049	1906	8,473,379	5,659,455	1918	21,383,979	20,693,704
1895	1,578,275	1,030,299	1907	12,779,799	8,348,659	1919	16,020,657	17,802,474
1896	3,205,343	2,149,503	1908	22,106,233	11,686,239	1920	13,330,357	13,450,330
1897	5,558,456	3,323,395	1909	27,529,473	14,178,504	1921	13,543,198	8,485,355
1898	4,452,333	2,593,929	1910	32,869,264	17,580,504	1922	18,581,439	12,576,758

18.—Quantity and Value of Silver Produced in Canada, by Provinces, during the calendar years 1911-1922.

Years.	Ontario.		Quebec.		British Columbia.		Yukon Territory.	
	Oz.	$	Oz.	$	Oz.	$	Oz.	$
1911	30,540,754	16,279,443	18,435	9,827	1,887,147	1,005,924	112,708	60,078
1912	29,214,025	17,772,352	9,465	5,758	2,651,002	1,612,737	81,068	49,318
1913	28,411,261	16,987,377	34,573	20,672	3,312,343	1,980,483	87,626	52,393
1914	25,139,214	13,779,055	57,737	31,646	3,159,897	1,731,971	92,973	50,959
1915	22,748,609	11,302,419	63,450	31,524	3,565,852	1,771,658	248,049	123,241
1916	21,608,158	14,188,133	98,610	64,748	3,392,872	2,227,794	360,101	236,446
1917	19,301,835	15,714,975	136,194	110,885	2,655,994	2,162,430	119,605	97,379
1918	17,198,737	16,643,562	178,675	172,907	3,921,336	3,794,755	71,915	69,594
1919	12,117,878	13,465,628	140,926	156,600	3,713,537	4,126,556	27,556	30,621
1920	9,907,626	9,996,795	61,003	61,552	3,327,028	3,356,971	19,190	19,363
1921	9,761,607	6,116,037	38,084	23,861	3,350,357	2,099,133	393,092	246,288
1922	10,811,903	7,300,305	–	–	7,150,937	4,828,384	663,493	447,997

Years.	Nova Scotia.		New Brunswick.		Manitoba.	
	Oz.	$	Oz.	$	Oz.	$
1917	–	–	445	363	7,201	5,863
1918	–	–	–	–	13,316	12,886
1919	–	–	–	–	20,760	23,069
1920	–	–	–	–	15,510	15,649
1921	25	16	–	–	33	20
1922	86	58	–	–	20	14

NOTE.—For the years 1887 to 1910, see Canada Year Book, 1916-1917, p. 271.

3.—Copper.

The copper mining industry has developed at a very rapid rate. The production was 3,505,000 lbs. in 1886 and had doubled six years later. In 1913, a pre-war year, the output had increased over twenty-one fold, amounting to over 76,976,000 lbs. The extraordinary demand for war requirements resulted in a maximum production from 1916 to 1918, when the average output was 115,048,931 lbs. The production during the calendar year 1922 was 42,879,818 lbs., of which 17,941,755 lbs. were produced during the first half of the year. The comparative figure for the first half of 1923 was 44,729,386 lbs., indicating a satisfactory recovery after the post-war depression.

Ontario.—The Sudbury deposits were first noticed in 1856, but did not attract attention until 1883, during the period of the construction of the Canadian Pacific Railway. A year later, a railway cutting was made through the small hill on which the Murray mine was afterwards located. During the first few years the deposits were exploited for their copper contents alone and not until 1886 was the presence of nickel determined and the true value of the ores made known. The nickel-copper ores of the Sudbury area are the source of nearly all the copper produced in Ontario. The ores contain from 1 to 2·5 p.c. of copper, the recovery averaging a little over 1·5 p.c. The British America Nickel Corporation erected a smelter at Nickelton and a refinery at Deschenes, Quebec, and has obtained 18 million tons of ore, chiefly from the Murray mine. The International Nickel Company, Ltd., has a smelting plant at Copper Cliff and a refinery at Port Colborne. The mining properties include the Creighton, the Crean Hill and the No. 2 mine at Copper Cliff. The smelter of the Mond Nickel Company is at Coniston, and the copper-nickel matte is exported to their refinery at Swansea, Wales.

British Columbia.—The production of copper in the province during 1922 amounted to 31,936,182 lbs., the Skeena, Trail creek and Vancouver (mainland) mining divisions being the chief producers. The Hidden creek or Anyox mine, south of the Portland canal, owned by the Granby Company, is probably the largest copper mine in the province. The claims are situated on a hill some 920 feet in height. There are two principal ore bodies, one from 100 to 250 feet wide and traced for some 1,500 feet, the other being about 400 feet wide and about 700 feet long. The Anyox plant situated on Observatory inlet and blown in during March, 1914, is a large pyritic smelter. The Le Roi Centre Star group, forming part of the property of the Consolidated Mining and Smelting Co., is situated on the southern slope of Red Mountain at Rossland. In the Vancouver mining division the chief producer is the Britannia mine, situated on the east side of Howe sound on the Pacific coast. The ores occur in a mineralized zone that is at least four miles long and towards its centre has a variable width of from 300 to 600 feet.

Manitoba.—Much development has been carried on in the Flin Flon district of Manitoba in the last eight years. The Mining Corporation of Canada, after securing a controlling interest in the Flin Flon group, has carried on extensive development work by sinking and cross-cutting, verifying the results of previous diamond drilling and proving large tonnages of ore to be in place. A branch extension of the Hudson Bay Railway and the construction of smelter works are required for the economic treatment of the copper ores of the district.

World's Production of Copper.—The world's production of copper was estimated at 591,290 short tons in 1921 as compared with 1,078,235 tons in the previous year. Preliminary estimates indicate that a considerable recovery was

effected in 1922, the production being given as 987,540 tons. Canada had an output of 21,440 tons in 1922, producing nearly 2·2 p.c. of the world's estimated total.

19.—Quantity and Value of Copper Produced in Canada, by Provinces, calendar years 1911-1922.

Years.	Ontario.		Quebec.		British Columbia.		Total.	
	Lb.	$	Lb.	$	Lb.	$	Lb.	$
1911	17,932,263	2,219,297	2,436,190	301,503	35,279,558	4,366,198	55,648,011	6,886,998
1912	22,250,601	3,635,971	3,282,210	536,346	50,526,656	8,256,561	77,832,127	12,718,548
1913	25,885,929	3,952,522	3,455,887	527,679	45,791,579	6,991,916	76,976,925	11,753,606
1914	28,948,211	3,937,536	4,201,497	571,488	41,219,202	5,606,636	75,735,960	10,301,606
1915	39,361,464	6,799,693	4,197,482	725,115	56,692,988	9,793,714	100,785,150	17,410,635
1916	44,997,035	12,240,094	5,703,347	1,551,424	63,642,550	17,312,046	117,150,028	31,867,150
1917	42,867,774	11,651,461	5,015,560	1,363,229	57,730,959	15,691,275	109,227,332[1]	29,687,989[1]
1918	47,074,475	11,593,502	5,869,649	1,445,577	62,865,681	15,482,560	118,769,434	29,250,536
1919	24,346,623	4,550,627	2,691,695	503,105	44,502,079	8,317,884	75,053,581	14,028,265
1920	32,059,993	5,596,392	880,638	153,724	45,319,771	7,911,019	81,600,691	14,244,217
1921	12,821,385	1,602,930	352,308	44,045	34,447,127	4,306,580	47,620,820	5,953,555
1922	10,943,636	1,464,477	–	–	31,936,182	4,273,700	42,879,818	5,738,177

PRODUCTION OF COPPER IN MANITOBA AND YUKON TERRITORY (INCLUDED IN TOTALS).

Years.	Manitoba, (included in totals).		Yukon Territory, (included in totals).	
	Lb.	$	Lb.	$
1912	–	–	1,772,660	289,670
1913	–	–	1,843,530	281,489
1914	–	–	1,367,050	185,946
1915	–	–	533,216	92,113
1916	–	–	2,807,096	763,586
1917	1,116,000	303,329	2,460,079	668,650
1918	2,339,751	576,234	619,878	152,663
1919	3,348,000	625,775	165,184	30,874
1920	3,062,577	534,604	277,712	48,475
1921	–	–	–	–
1922	–	–	–	–

NOTE.—For the years 1886 to 1910, see Canada Year Book, 1916-17, p. 272.

[1]Includes 36,960 lb., valued at $10,045, from New Brunswick and Alberta, not given separately.

20.—Copper Production of Seven Countries and of the World, 1913-1922.[1]

(In short tons of 2,000 pounds.)

Years.	United States.	Mexico.	Canada.	Chile.	Peru.	Spain and Portugal.	Japan.	World's production.
1913	614,255	58,185	38,460	46,574	30,609	39,683	73,283	1,072,674
1914	579,133	40,043	37,498	49,221	29,853	29,652	77,650	1,011,939
1915	712,126	34,128	52,016	57,680	38,269	40,895	83,108	1,188,172
1916	971,123	60,751	52,880	78,559	47,472	39,021	110,900	1,533,294
1917	961,016	52,348	55,790	112,985	49,784	45,084	119,058	1,579,675
1918	968,687	83,233	58,068	117,851	48,944	50,596	99,583	1,569,528
1919	604,642	66,661	39,789	87,721	43,243	38,581	86,468	1,069,437
1920	635,248	49,866	39,121	104,173	36,356	25,353	74,727	1,078,235
1921	238,420	13,576	23,810	61,421	37,258	36,596	59,626	591,290
1922	511,970	29,842	21,440	141,433	39,200	40,234	60,365	987,540

[1]On the authority of the Year Book of the American Bureau of Metal Statistics, New York.

4.—Lead.

Lead is obtained in Canada largely from the deposits of British Columbia. From 88,665 lbs. in 1891, the production advanced to over 39,000,000 lbs. in 1897, an average increase of about 6·5 million lbs. per year. Owing to the low price of silver in 1898 and labour troubles in the Slocan in 1899, the output fell off to 21·9 million lbs. in 1899, but rose to 63·2 million in 1900. This increase was due to the development of two or three mines in the Fort Steele mining division, although all the lead producing districts except Ainsworth showed a material increase in production. The output fell to 18·1 million lbs. in 1903, owing to the condition of the market affecting the production of the low grade silver-lead ores of the East Kootenay district. An Act was passed in October, 1903, providing for the payment of bounties on lead contained in lead-bearing ores mined in Canada. As a direct result of the bounty, the output increased to 56·9 million lbs. in 1905, but fell off gradually to 23·7 million lbs. in 1910. A steady improvement has since been experienced and a total of 93·3 million lbs. was reached in 1922.

British Columbia.—In the East Kootenay district, the Consolidated Mining and Smelting Company operates many important mines, the principal of which is the Sullivan lead-zinc mine near Kimberley. The ore averages, on large shipments, about 16·5 p.c. lead, 14 p.c. zinc and 7 ounces of silver to the ton. In the West Kootenay district the ores are chiefly argentiferous galena and zinc-blende, occurring as veins in granites and slates. The ores range from 7 p.c. to 75 p.c. of lead with considerable values of silver.

Ontario.—Lead mining on an important scale in Ontario is bound up with the successful operations of the Galetta mine and smelter. The deposit on the property occupies a well marked fault fissure cutting across the strike of the pre-Cambrian crystalline limestone, the ore mineral being galena carrying very little silver, associated with minor quantities of zinc blende and pyrites.

21.—Quantity and Value of Lead Produced from Canadian Ores, calendar years 1887-1922.

Years.	Pounds.	Value.	Cents per pound[1].	Years.	Pounds.	Value.	Cents per pound[1].
		$				$	
1887	204,800	9,216	5·400	1905	56,864,915	2,676,632	4·707
1888	674,500	29,812	4·420	1906	54,608,217	3,089,187	5·657
1889	165,100	6,488	3·930	1907	47,738,703	2,542,086	5·325
1890	105,000	4,704	4·480	1908	43,195,733	1,814,221	4·200
1891	88,665	3,857	4·350	1909	45,857,424	1,602,139	3·690
1892	808,420	33,064	4·090	1910	32,987,508	1,216,249	3·687
1893	2,135,023	79,636	3·730	1911	23,784,969	827,717	3·480
1894	5,703,222	187,636	3·290	1912	35,763,476	1,597,554	4·467
1895	16,461,794	531,716	3·230	1913	37,662,703	1,754,705	4·659
1896	24,199,977	721,159	2·980	1914	36,337,765	1,627,568	4·479
1897	39,018,219	1,396,853	3·580	1915	46,316,450	2,593,721	5·600
1898	31,915,319	1,206,399	3·780	1916	41,497,615	3,532,692	8·513
1899	21,862,436	977,250	4·470	1917	32,576,281	3,628,020	11·137
1900	63,169,821	2,760,521	4·370	1918	51,398,002	4,754,315	9·250
1901	51,900,958	2,249,387	4·334	1919	43,827,669	3,053,037	6·966
1902	22,956,381	934,095	4·069	1920	35,953,717	3,214,262	8·940
1903	18,139,283	768,562	4·237	1921	66,679,592	3,828,742	5·742
1904	37,531,244	1,617,221	4·309	1922	93,307,171	5,817,702	6·219

[1]In 1909 and 1910, average prices at Toronto as quoted by *Hardware and Metal*: in previous years, average prices at New York, as quoted by *Engineering and Mining Journal*. From 1911 to date, average price in Montreal. Quotations furnished from 1911 to 1919, by Messrs. Thos. Robertson & Co., Montreal Que.; 1920 to 1922 by Consolidated Mining and Smelting Company, Montreal, Que.

World's Production.—The world's production of lead in 1922 was about 1,149,268 short tons. The principal producers were the United States with 40·9 p.c., Mexico 11·6 p.c., Australia 10·3 p.c. and Spain with 9·3 p.c. Canada produced about 4·0 p.c. of the total.

5.—Nickel.

With the exception of the nickel in the ores shipped from the Cobalt district and from the Alexo mine in the Porcupine area, the Canadian production of nickel is derived entirely from the well known nickel-copper deposits of the Sudbury district, Ontario. From 830,477 lbs. in 1889, the production increased continually in trend to 92·5 million lbs. in 1918, constituting a record. In 1921 nearly 19·2 million lbs. were produced as compared with 17·6 million lbs. in 1922 and 27·1 million lbs. during the first six months of 1923.

Sudbury.—The nickel-bearing rocks of the Sudbury district, with a width of about two and one-half miles, form a wide ellipse thirty-six miles long and thirteen miles broad. The ores consist mainly of a mixture of pyrrhotite and chalcopyrite intimately associated with more or less country rock. The nickel occurs in the pyrrhotite as pentlandite and varies somewhat in amount. The ore deposits are of three main types—marginal deposits, offset deposits and vein-like deposits, of which the marginal have proved the most productive. The Creighton mine, which may be called the greatest nickel mine in the world, is an example of a marginal deposit. The Copper Cliff mine is an example of an offset deposit, while the Vermilion mine is probably the best example of a vein-like deposit, probably formed by hot circulating waters. The ore mined in the district varies considerably in richness, the average metal content being about 2 to 3 p.c. of nickel, 1½ to 2 p.c of copper and 45 p.c. of iron. Cobalt, gold, silver, platinum and palladium are nearly always present in very small quantities. The matte produced by the International Nickel Company averages about 54 to 56 p.c. of nickel and about 24 p.c. of copper, while that of the Mond Nickel Company contains about 41 p.c. each of nickel and of copper.

World's Production.—The world's production of nickel, exclusive of electrolytic nickel, in 1920 was about 30,018 long tons of which output 91 p.c. was of Canadian origin and about 7 p.c. was derived from the oxidized ores of New Caledonia. The proved deposits of nickel ore in Canada are estimated to contain two million tons of nickel and there are at present large reserves undeveloped.

22.—Quantity and Value of Nickel Produced in Canada during the calendar years 1889-1922.

Years.	Quantity.	Value.	Years.	Quantity.	Value.	Years.	Quantity.	Value.
	Lb.	$		Lb.	$		Lb.	$
1889.....	830,477	498,286	1900	7,080,227	3,327,707	1911	34,098,744	10,229,623
1890.....	1,435,742	933,232	1901	9,189,047	4,594,523	1912	44,841,542	13,452,463
1891.....	4,035,347	2,421,208	1902	10,693,410	5,025,903	1913	49,676,772	14,903,032
1892.....	2,413,717	1,399,956	1903	12,505,510	5,002,204	1914	45,517,937	13,655,381
1893.....	3,982,982	2,071,151	1904	10,547,883	4,219,153	1915	68,308,657	20,492,597
1894.....	4,907,430	1,870,958	1905	18,876,315	7,550,526	1916	82,958,564	29,035,498
1895.....	3,888,525	1,360,984	1906	21,490,955	8,948,834	1917	82,330,280	33,732,112
1896.....	3,397,113	1,188,990	1907	21,189,793	9,535,407	1918	92,507,293	37,002,917
1897.....	3,997,647	1,399,176	1908	19,143,111	8,231,538	1919	44,544,883	17,817,953
1898.....	5,517,690	1,820,838	1909	26,282,991	9,461,877	1920	61,335,706	24,534,282
1899.....	5,744,000	2,067,840	1910	37,271,033	11,181,310	1921	19,293,060	6,752,571
						1922	17,597,123	6,158,993

6.—Cobalt.

The major portion of the world's supply of cobalt has for almost two decades been derived from the silver-cobalt-nickel arsenides of the Cobalt district, the silver refineries at Thorold and Deloro in Ontario having practically controlled the world's production in recent years.

The ore bodies at Cobalt, discovered in 1902, carry silver, cobalt, nickel and arsenic. About 80 p.c. of the productive veins occur in the Keewatin, which consists of basic igneous rocks underlying the Cobalt series, the remaining 20 p.c. being about equally divided between the Keewatin and Nipissing diabase.

During the first six months of 1923, the Coniagas and Deloro smelters treated ores and residues from the district and marketed cobalt oxide, metallic cobalt and unseparated oxides of nickel and cobalt. The cobalt residues from the cyanide process were for the most part treated in Canada, although some of these, as well as smelter residues, amounting in all to 187 tons containing 62,880 lbs. of cobalt, were shipped abroad for treatment. The cobalt production of Canada during the first half of 1923 was 538,018 lbs., valued at $1,533,351. For 1922 production and values see Table 2 of this section.

7.—Zinc.

The zinc mining industry of Canada has recently made rapid strides, largely on account of the application of the electrolytic method of treating the lead-zinc ores of British Columbia. The metallic recoveries from Canadian ores were about 56·3 million lbs. in 1922 as compared with 7·0 million lbs. in 1913. From an insignificant position in 1913, the country advanced to the fifth rank among the world's producers in 1922, with an output of about 3·5 p.c. of the world total.

Quebec.—The Notre Dame des Anges mines at Montauban, in the county of Portneuf, were until recently important shippers of lead-zinc concentrates. The chief ore minerals were ferruginous zinc blende, intimately associated with galena; the ore carried gold and silver values.

British Columbia.—The principal zinc mining regions are situated in the Kootenay district of British Columbia, where there are large deposits of silver-lead-zinc ore. The chief producing mine is the Sullivan in the Fort Steele division, where the ore worked is a replacement deposit of considerable size. Other active mines are located at Ainsworth and Slocan in the West Kootenay district and at Omineca in the Cariboo district.

The industry before the war was greatly retarded by unsatisfactory marketing conditions. The majority of the mines were essentially producers of silver and lead, and zinc blende occurred as an accessory ore. Until local smelting proved successful, practically all the British Columbia ores were treated at seven or more smelters in the United States, but the cost of freight to these, although covered by a combined 'freight and treatment rate" was necessarily an important charge against the ore. The high tariff on zinc ores exported to the United States was also a consideration. The smelter at Trail, originally intended on its erection in 1895, for the treatment of gold and silver-bearing copper ores, was made ready for the treatment of silver-lead ores at a later date. The electrolytic zinc plant was added for regular commercial operations early in 1916; its capacity is rated at a hundred tons per day.

The higher prices paid for silver during the period of the war led the producers of silver-bearing ores to expedite shipments, disregarding the increased quantity of zinc middling. No zinc is recovered in lead blast furnace smelting, and it is

detrimental to operation, causing losses, slow running and high cost. The treatment charges of the Trail smelter were altered in January, 1918, with the object of bringing about an increase of the ratio of slag-forming elements to zinc in all ores requiring it, through the elimination of some of the zinc. No lead ore containing more than 20 p.c. of zinc was accepted and for lead ores containing 4 p.c. of zinc or over the shipper was penalized according to the amount of the zinc present. A new schedule was announced in April, 1922, providing for payment for zinc in ores on a sliding scale running from 30 to 35 p.c. zinc.

23.—Production of Zinc in Canada, calendar years 1911-1922.

Years.	Production of Zinc.			Years.	Production of Zinc.		
	Quantity[1].	Value.	Average price per pound.		Quantity[1].	Value.	Average price per pound.
	lb.	$	cts.		lb.	$	cts.
1911.....	1,877,479	108,105	5·758	1917.....	29,668,764	2,640,817	8·901
1912.....	4,283,760	297,421	6·943	1918.....	35,083,175	2,862,436	8·159
1913.....	5,640,195	318,558	5·648	1919.....	32,194,707	2,362,448	7·338
1914.....	7,246,063	377,737	5·213	1920.....	39,863,912	3,057,961	7·671
1915.....	9,771,651	1,292,789	13·230	1921.....	53,089,356	2,471,310	4·655
1916.....	23,364,760	2,991,623	12·804	1922.....	56,290,000	3,217,536	5·716

[1]Estimated smelter recoveries including, for years 1916 to 1922, the actual zinc recovered at Trail, B.C.

8.—Iron.

The fact that iron ore is widely distributed in Canada has long been known, and extensive deposits have been discovered from time to time. The development of the iron mining industry, however, has been retarded by the abundant supply of the higher grade ores of Wabana, Newfoundland, and of the Mesabi range of the state of Minnesota.

Nova Scotia.—The Wabana section of Newfoundland contains the largest single deposit of iron ore in the world, operated by the British Empire Steel Corporation. The probable reserves of Newfoundland were estimated by J. P. Howley as 3,635 million tons and analysis has shown that the Wabana ore consists of an exceptionally high grade hematite. Ore to the amount of 887,360 tons was shipped in 1922 to the blast furnaces of the company at Sydney, where the proximity of the adjacent coalfield favours the economical production of pig iron and steel. Development work carried on at Torbrook in Annapolis county indicates that the deposits are very extensive. The ore is red hematite containing a good percentage of iron rather high in phosphorus. The main iron ore field in Antigonish county is the Arisaig district.

New Brunswick.—The most important deposits so far discovered are those in the Austin Brook district of Bathurst county, where mining experts state that great masses of iron ore have been proven.

Quebec.—It is estimated that there are many millions of tons of iron magnetite sands, containing a high percentage of iron, along the north shore of the St. Lawrence at Moisie, Mingan, Natashkwan and other places in the county of Saguenay. The sands contain a high percentage of titanium, rendering the briquetted iron sands unfavourable for blast furnace treatment. There are a number of deposits of bog iron ore in the St. Lawrence valley, remarkably free from sulphur and phosphorus. The bog iron ores were successfully used in charcoal blast furnaces at Radnor Forges

and Drummondville for many years. Iron ore deposits also exist along the Gatineau river, in Hull township, within a few miles of the city of Ottawa. The Bristol mine, in Pontiac county, has been proved to contain large deposits of magnetite, but the ore is high in sulphur and would require roasting.

Ontario.—The iron and steel industry in Ontario is chiefly dependent on imported ores, but several companies have continued to demonstrate what can be done by the beneficiation of low grade Canadian ores. The Moose Mountain iron range is situated about 35 miles north of Sudbury and over 100 million tons of magnetite have been proved by the owners. The Atikokan district, west of Sabawa lake, contains approximately 15 million tons of magnetite, while the Atikokan mine, to the east of the lake, has shown 10 million tons. The deposits of non-Bessemer ore in the Michipicoten district are extensive and millions of tons of red hematite were taken from the Helen mine. The Magpie mine produces siderite, which is roasted before being shipped to the blast furnaces at Sault Ste. Marie owned by the Algoma Steel Co.

British Columbia.—Owing to the lack of a local iron smelting industry the production of iron ore in British Columbia has not reached important dimensions. On the northeast coast of Texada island there are extensive deposits estimated to contain five million tons of magnetite. The Glen iron mine on the south side of Kamloops lake, estimated to contain reserves of 8 million tons, has been worked intermittently for several years, the ore being shipped to Tacoma and to the Revelstoke Smelting Works.

24.—Iron Ore Shipments and Production of Pig Iron, calendar years 1909-1922.

Years.	Ore shipments from Canadian mines	Production of Pig Iron.							
		Nova Scotia.		Quebec.		Ontario.		Totals.	
	Short tons.	Short tons.	$	Short tons.	$	Short tons.	$	Short tons.	$
1909....	268,043	354,380	3,453,800	4,770	125,623	407,012	6,002,441	757,162	9,581,864
1910....	259,418	350,287	4,203,444	3,237	85,255	447,273	6,956,923	800,797	11,245,622
1911....	210,344	390,242	4,682,904	658	17,282	526,635	7,606,939	917,535	12,307,125
1912....	215,883	424,991	6,374,910	–	–	589,593	8,176,089	1,014,587	14,550,999
1913....	307,634	480,068	7,201,020	–	–	648,899	9,338,992	1,128,967	16,540,012
1914....	244,854	227,052	2,951,676	–	–	556,112	7,051,180	783,164	10,002,856
1915....	398,112	420,275	5,463,575	–	–	493,500	5,910,624	913,775	11,374,199
1916....	275,176	470,055	7,050,825	–	–	699,202	9,700,073	1,169,257	16,750,898
1917....	215,302	472,147	10,387,234	–	–	684,642	13,902,867	1,170,480[1]	25,025,960[1]
1918....	211,608	415,870	10,451,400	7,449	419,521	747,650	21,324,857	1,195,551[1]	33,495,171[1]
1919....	197,170	285,087	7,141,641	7,701	331,797	624,993	17,104,151	917,781	24,577,589
1920....	129,072	332,493	7,687,614	8,835	379,348	749,068	22,252,062	1,090,396	30,319,024
1921....	59,509	169,504	4,407,104	683	17,758	495,489	12,882,714	665,676	17,307,576
1922[2]....	17,971	135,261	3,139,994	–	–	293,662	6,493,513	428,923	9,633,507

[1]Included in the totals is additional pig iron made in electric furnaces from scrap metal other than in the province of Quebec. The amounts and values were in 1917, 13,691 short tons with a value of $735,859 and in 1918, 24,582 tons with a value of $1,299,393.
[2]Subject to revision.

3.—Non-Metallic Minerals.

1.—Coal.

The fuel situation of Canada is somewhat anomalous, as in spite of the enormous resources of coal in the country, about 50 p.c. of the consumption is imported from the United States. The Canadian coal areas are situated in the eastern and western

provinces, while Ontario and Quebec are more easily and economically supplied with coal from the nearer coal fields of Pennsylvania and Ohio. The anomaly of this situation is heightened if we consider that Canada's present coal consumption is about 30 million tons annually, as against reserves of 1,234,289 million metric tons, sufficient for an unthinkably long period at the present rate of consumption. Although distance has prevented the domestic deposits from supplying the needs of central Canada, this acute fuel area is but a few hundred miles distant from the great coal regions of the United States, and it is upon that country, therefore, that Ontario and the greater part of Quebec have become peculiarly dependent for their fuel.

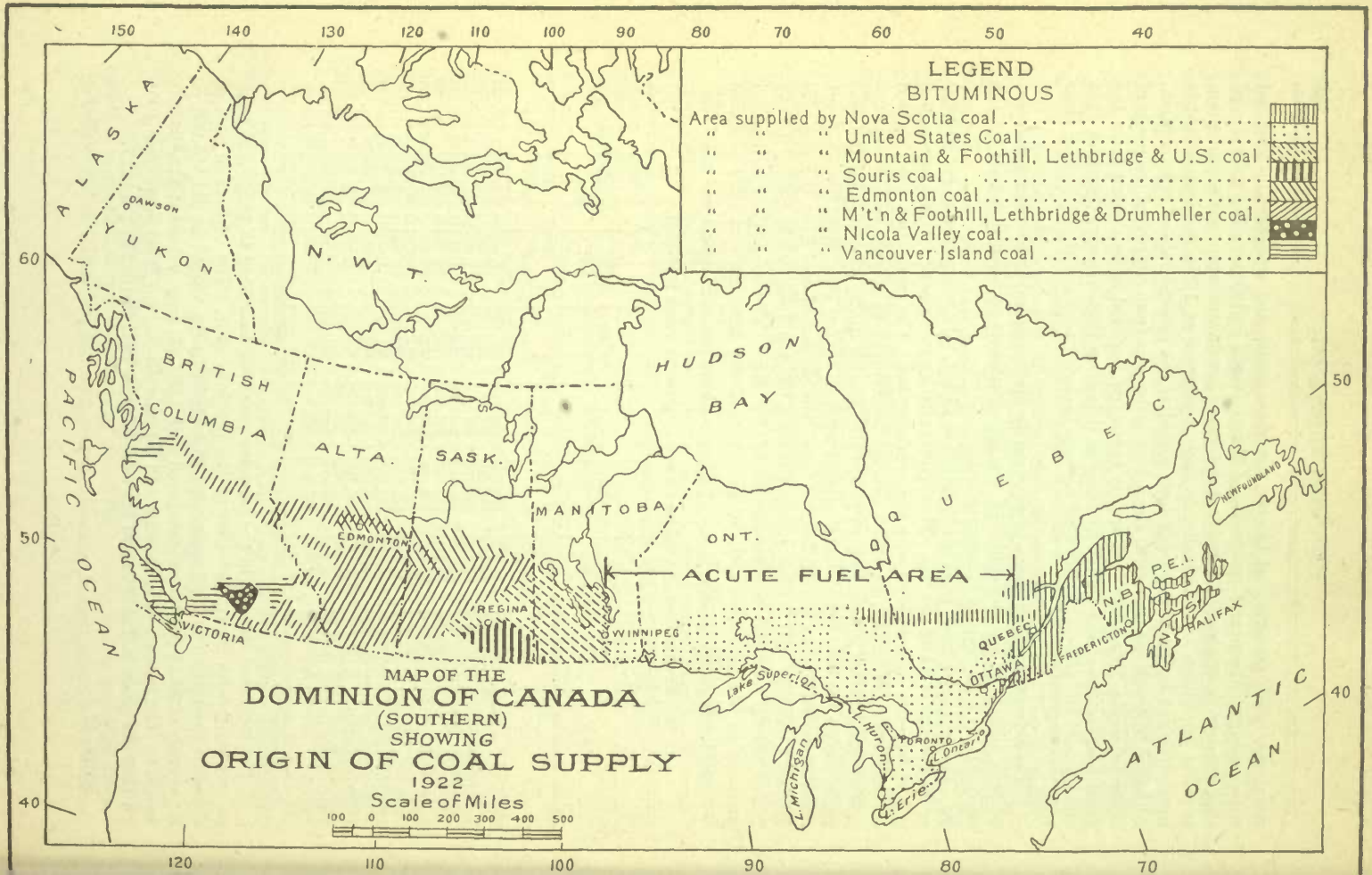
The accompanying diagram, by showing the areas supplied with coal from different sources, illustrates the difficulties of the fuel situations occasioned in part by the unavoidably high costs of transportation.

The coal production in 1922 amounted to 15,157,431 tons, valued at $65,518,497 or an average of $4.32 per ton. This represented an increase of 100,000 tons or 0·6 p.c. in quantity as compared with the previous year. The production was obtained by 496 operators, employing on an average 30,096 men at a wage cost of approximately $36,000,000. Referring to production during 1922, Alberta held the first place among the coal producing provinces with an output of 5,990,911 tons; Nova Scotia followed closely with 5,569,072 tons; the output of coal from the mines of British Columbia and Yukon amounted to 2,927,498 tons, while Saskatchewan mined 382,437 tons and New Brunswick 287,513 tons. The quantity of coal mined annually in five provinces and the Yukon Territory from 1909 to 1922 is shown comparatively in Table 25.

25.—Production of Coal in Canada, calendar years 1909-1922.

Years.	Nova Scotia.	New Brunswick.	Saskatchewan.	Alberta.	British Columbia.	Yukon Territory.	Total production.	Value.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	$
1909	5,652,089	49,029	192,125	1,994,741	2,606,127	7,364	10,501,475	24,781,236
1910	6,431,142	55,455	181,156	2,894,469	3,330,745	16,185	12,909,152	30,909,779
1911	7,004,420	55,781	206,779	1,511,036	2,542,532	2,840	11,323,388	26,467,646
1912	7,783,888	44,780	225,342	3,240,577	3,208,997	9,245	14,512,829	36,019,044
1913	7,930,073	70,311	212,897	4,014,755	2,714,420	19,722	15,012,178	37,334,940
1914	7,370,924	98,049	232,299	3,683,015	2,239,799	13,443	13,637,529	33,471,801
1915	7,463,370	127,391	240,107	3,360,818	2,065,613	9,724	13,267,023	32,111,182
1916	6,912,140	143,540	281,300	4,559,054	2,584,061	3,300	14,483,395	38,817,481
1917	6,327,091	189,095	355,445	4,736,368	2,433,888	4,872	14,046,759	43,199,831
1918	5,818,562	268,212	346,847	5,972,816	2,568,589	2,900	14,977,926	55,192,896
1919	5,720,373	179,108	380,169	4,964,535	2,435,933	1,100	13,681,218	54,413,349
1920	6,395,545	161,164	349,860	6,859,346	2,856,920	763	16,623,598	77,326,853
1921	5,734,928	188,192	335,632	5,909,217	2,890,291	233	15,057,262	72,451,656
1922	5,569,072	287,513	382,437	5,990,911	2,927,033	465	15,157,431	65,518,497

The total coal imports in the calendar year 1922 amounted to 14,257,424 tons, as compared with 20,815,596 tons in the previous year. The exports of coal of domestic production in 1922 amounted to 1,818,582 tons, valued at $11,159,060, or an average of $6.14 per ton, as compared with 1,987,251 tons, valued at $13,896,370, in 1921. The imports of anthracite and bituminous coal for fiscal years from 1901 to 1923 are given in Table 26 and the exports from 1903 to 1923 in Table 27.


LEGEND
BITUMINOUS
Area supplied by Nova Scotia coal
" " " United States Coal
" " " Mountain & Foothill, Lethbridge & U.S. coal
" " " Souris coal
" " " Edmonton coal
" " " M't'n & Foothill, Lethbridge & Drumheller coal.
" " " Nicola Valley coal
" " " Vancouver Island coal
ALASKA
DAWSON
YUKON
N. W. T.
BRITISH COLUMBIA
ALTA.
SASK.
MANITOBA
ONT.
QUEBEC
HUDSON BAY
PACIFIC OCEAN
ATLANTIC OCEAN
NEWFOUNDLAND
P.E.I.
N.B.
N.S.
EDMONTON
REGINA
WINNIPEG
VICTORIA
QUEBEC
FREDERICTON
HALIFAX
OTTAWA
TORONTO
Lake Superior
L. Michigan
Huron
Erie
L. Ontario
ACUTE FUEL AREA
MAP OF THE
DOMINION OF CANADA
(SOUTHERN)
SHOWING
ORIGIN OF COAL SUPPLY
1922
Scale of Miles
100 0 100 200 300 400 500
150 140 130 120 110 100 90 80 70 60 50 40
60 50 40
120 110 100 90 80 70
50 40

The apparent consumption during 1922 amounted to 27,596,273 tons, as compared with 31,173,837 tons in the preceding calendar year. In 1922, when the output was 15·2 million tons, the quantity exported amounted to 1·8 million tons, and imports to 14·3 million tons, resulting in an apparent consumption of 27·6 million tons. The data given in Tables 28 and 29 show the amount of coal made available for consumption in the entire country for a period of 22 years and in each of the provinces during 1922. The data of output and of interprovincial shipments were compiled from monthly statements furnished by the coal operators.

26.—Imports into Canada of Anthracite and Bituminous Coal for Home Consumption, fiscal years 1901-1923.

Fiscal Years.	Anthracite, Free of Duty.		Bituminous Coal, Dutiable.	
	Tons.	$	Tons.	$
1901	1,933,283	7,923,950	2,516,392	4,956,025
1902	1,652,451	7,021,939	3,047,392	5,712,058
1903	1,456,713	7,028,664	3,511,421	7,776,717
1904	2,275,018	10,461,223	4,053,900	9,108,208
1905	2,604,137	12,093,371	4,176,274	8,022,896
1906	2,200,863	10,304,303	4,495,550	8,360,349
1907[1]	2,014,846	9,487,574	3,807,604	7,491,045
1908	3,091,159	14,199,609	7,640,121	14,843,789
1909	3,059,663	14,034,020	6,763,352	13,151,449
1910	3,152,851	14,456,315	7,017,271	13,070,343
1911	3,465,774	15,750,340	7,745,571	14,597,268
1912	4,118,379	19,306,639	10,500,662	20,333,268
1913	4,237,310	20,399,279	11,060,910	20,447,587
1914	4,385,799	20,734,126	13,754,244	26,140,676
1915	4,383,497	20,927,539	9,124,499	16,135,920
1916	4,429,143	20,460,571	9,631,101	10,219,206
1917	4,572,440	22,806,156	12,931,075	19,270,270
1918	5,256,294	28,047,226	16,400,000	46,277,715
1919	4,752,788	26,191,798	16,569,025	44,411,207
1920	5,090,767	32,647,759	12,552,910	27,424,870
1921	4,839,559	39,058,148	15,407,996	72,239,952
1922	4,416,255	39,000,610	12,752,059	39,258,115
1923	3,155,613	28,089,041	11,166,937	44,025,436

NOTE.—Anthracite coal dust is included under anthracite coal. For previous years, see Year Book, 1911, page 420. [1]Nine months.

27.—Exports of Coal, the Produce of Canada, fiscal years 1903-1923.

Fiscal Years.	Quantity.	Value.	Fiscal Years.	Quantity.	Value.
	Tons.	$		Tons.	$
1903	1,797,951	5,542,434	1913	2,055,993	5,555,099
1904	1,646,505	4,346,660	1914	1,498,820	3,703,765
1905	1,615,322	3,930,802	1915	1,512,487	4,466,258
1906	1,820,411	4,643,198	1916	1,971,124	6,032,764
1907 (9 mos.)	1,285,346	3,346,402	1917	1,899,185	6,817,035
1908	1,877,258	4,810,284	1918	1,902,010	8,684,038
1909	1,613,892	4,505,221	1919	1,826,639	10,169,722
1910	1,826,339	5,013,221	1920	2,120,138	13,183,666
1911	2,315,171	6,014,095	1921	2,277,202	16,501,478
1912	1,494,756	4,338,128	1922	1,953,053	13,182,440
			1923	2,089,438	12,956,615

28.—Annual Consumption of Coal in Canada, calendar years 1901-1922.

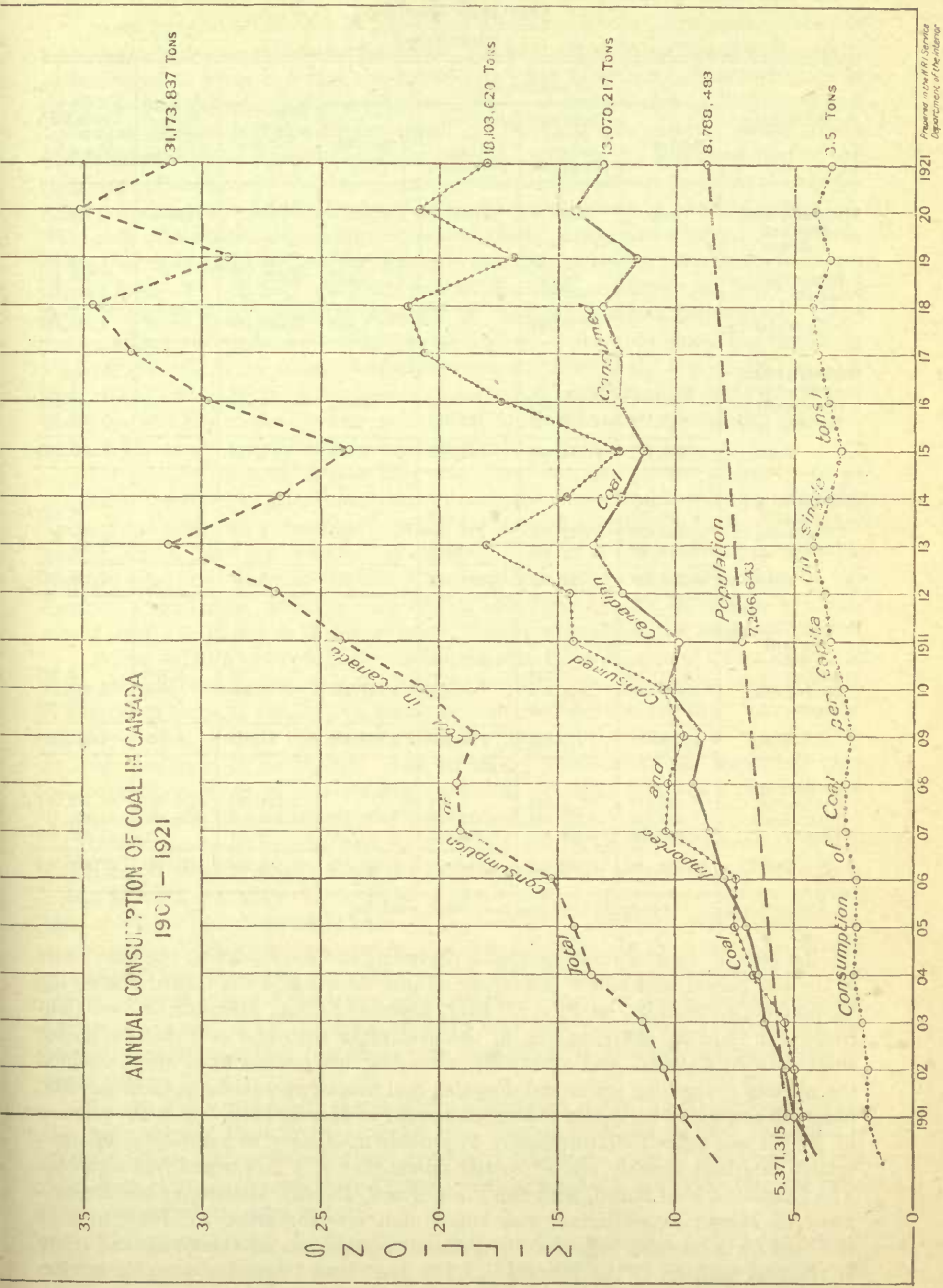
Calendar Years.	Canadian.		Imported.		Total, tons.	Tons per capita.
	Short tons.	p.c.	Short tons.	p.c.		
1901	4,912,664	50·5	4,810,213	49·5	9,722,877	1·810
1902	5,376,413	51·0	5,165,938	49·0	10,542,351	1·927
1903	6,005,735	52·2	5,491,870	47·8	11,507,605	2·055
1904	6,697,183	49·2	6,909,651	50·8	13,606,834	2·346
1905	7,032,661	48·9	7,343,880	51·1	14,316,541	2·362
1906	7,997,560	51·7	7,398,906	48·3	15,326,466	2·425
1907	8,617,352	45·0	10,549,503	55·0	19,166,855	2·947
1908	9,156,478	47·3	10,195,424	52·7	19,351,902	2·820
1909	8,913,376	47·9	9,711,826	52·1	18,625,202	2·682
1910	10,532,103	50·2	10,438,123	49·8	20,970,226	2·960
1911	9,822,749	40·5	14,424,949	59·5	24,247,698	3·365
1912	12,385,696	46·0	14,549,104	54·0	26,934,800	3·657
1913	13,450,158	42·6	18,132,387	57·4	31,582,545	4·196
1914	12,214,403	45·5	14,637,920	54·5	26,852,323	3·490
1915	11,500,480	48·1	12,406,212	51·9	23,906,692	3·041
1916	12,348,036	41·3	17,517,820	58·7	29,865,856	3·717
1917	12,313,603	37·2	20,810,132	62·8	33,123,735	4·049
1918	13,160,731	37·8	21,611,101	62·2	34,771,832	4·175
1919	11,849,046	41·1	16,982,773	58·9	28,831,819	3·401
1920	14,388,541	40·9	20,815,596	59·1	35,204,137	4·079
1921	13,070,217	41·9	18,103,620	58·1	31,173,837	3·547
1922	13,338,849	48·3	14,257,424	57·7	27,596,273	3·078

NOTE.—For years 1886 to 1900, see 1921 Year Book, p. 354.

29.—Coal Made Available for Consumption in Canada, by Provinces, calendar year 1922.

(Short Tons.)

Provinces.	Canadian Coal.				Imported from U.S.A.	Imported from Great Britain.	Coal available for consumption.
	Output.	Received from other Provinces.	Shipped to other Provinces.	Exported.			
Prince Edward Island—	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Anthracite	–	–	–	–	4,589	–	4,589
Bituminous	–	70,995	–	–	1,355	–	72,350
Total	–	70,995	–	–	5,944	–	76,939
Nova Scotia—							
Anthracite	–	–	–	–	21,419	5,645	27,064
Bituminous	5,569,072	39	1,882,787	641,304	6,233	3,267	3,054,520
Total	5,569,072	39	1,882,787	641,304	27,652	8,912	3,081,581
New Brunswick—							
Anthracite	–	–	–	–	40,252	19,420	59,672
Bituminous	287,513	403,742	63,067	66,460	61,222	19,131	642,081
Total	287,513	403,742	63,067	66,460	101,474	38,551	701,753
Quebec—							
Anthracite	–	–	–	–	789,447	152,517	941,964
Bituminous	–	1,454,214	–	55,275	1,316,669	609,591	3,325,199
Lignite	–	102	–	–	–	–	102
Total	–	1,454,316	–	55,275	2,106,116	762,108	4,267,265
Central Ontario—							
Anthracite	–	–	–	–	1,586,036	900	1,586,936
Bituminous	–	16,864[1]	–	76	7,485,324	6,929	7,509,041
Total	–	16,864	–	76	9,071,360	7,829	9,095,977


ANNUAL CONSUMPTION OF COAL IN CANADA
1901 – 1921
MILLIONS
35
30
25
20
15
10
5
0
31,173,837 Tons
10,103,629 Tons
13,070,217 Tons
8,788,493
3.5 Tons
5,371,315
Total Consumption of Coal in Canada
Consumption of Coal per Capita in long tons
Coal and Canadian Coal Consumed
Population
7,206,643
1901 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 1921

29.—Coal Made Available for Consumption in Canada, by Provinces, calendar year 1922—concluded.

(Short Tons.)

Provinces.	Canadian Coal.				Imported from U.S.A.	Imported from Great Britain.	Coal available for consumption.
	Output.	Received from other Provinces.	Shipped to other Provinces.	Exported.			
Manitoba and Head of Lakes—	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Anthracite	–	10	–	–	72,240	–	72,250
Bituminous	–	94,607	–	2,082	2,037,117	–	2,129,642
Lignite	–	625,487	–	–	–	–	625,487
Total	**–**	**720,104**	**–**	**2,082**	**2,109,357**	**–**	**2,827,379**
Saskatchewan—							
Anthracite	–	796	–	–	231	–	1,027
Bituminous	–	147,209	–	5,040	1,484	–	143,653
Lignite	382,437	1,106,648	169,813	–	–	–	1,319,272
Total	**382,437**	**1,254,653**	**169,813**	**5,040**	**1,715**	**–**	**1,463,952**
Alberta—							
Anthracite	40,417	.....	2,034	–	–	–	38,383
Bituminous	2,846,405	10,646	243,758	915	1,147	–	2,613,525
Lignite	3,104,089	588	1,636,498	–	–	–	1,468,179
Total	**5,990,911**	**11,234**	**1,882,290**	**915**	**1,147**	**–**	**4,120,087**
British Columbia and Yukon—							
Anthracite	–	1,228	–	–	35	1,226	2,489
Bituminous	2,927,498	38,172	46,876	1,047,430	13,494	504	1,885,362
Lignite	–	73,486	–	–	–	–	73,486
Total	**2,927,498**	**112,886**	**46,876**	**1,047,430**	**13,529**	**1,730**	**1,961,337**
Canada—							
Anthracite	40,417	2,034	2,034	–	2,514,249	179,708	2,734,374
Bituminous	11,630,488	2,236,488	2,236,488	1,818,582	10,924,045	639,422	21,375,373
Lignite	3,486,526	1,806,311	1,806,311	–	–	–	3,486,526
Total	**15,157,431**	**4,044,833**	**4,044,833**	**1,818,582**	**13,438,294**	**819,130**[2]	**27,596,273**

[1] Maritime coal. [2] Includes 1,805 tons from other countries.

In view of the abnormal conditions prevailing in Canada during the later years of the war period, and also of the falling off of production in the United States, the Dominion Government, on July 12, 1917, appointed C. A. Magrath as Fuel Controller for Canada, charging him in the first place with the duty of stimulating shipments to Canada, and eventually extending his powers until they included the work of controlling prices and directing coal mining operations in Canada. Mr. Magrath concluded his duties as Fuel Controller in March, 1919, but in the summer of 1922 it was again found necessary to provide machinery to handle the administrative problems directly related to the tiding over of a threatened fuel shortage. The Dominion Fuel Board, with Charles Camsell, Deputy Minister of the Department of Mines, as chairman, was constituted on November 25, 1922, to meet the need for a standing organization definitely responsible for the systematic study of the fuel position of the Dominion. The Fuel Board issued a valuable interim report on the Canadian fuel situation on May 21, 1923.

Coal Resources of the Provinces.

Nova Scotia.—The coal of Nova Scotia belongs to the Carboniferous formation, the largest workable seams forming a part of the middle portion of that system or belonging to what is styled the Productive Coal Measures. This formation is found in several portions of the province, chiefly at Sydney and in Richmond and Inverness counties in Cape Breton island, at Pictou in the eastern part of Nova Scotia proper and at Springhill and Joggins, which are in the northwest part of the province in Cumberland county. Seams of considerable size are found in the underlying portions of the Middle Carboniferous, otherwise known as the Millstone-Grit. The coals of Nova Scotia are bituminous, of good quality, well adapted to the production of coke and excellent for domestic use and for steam purposes.

Sydney.—The Sydney coalfield, one of the most important in Nova Scotia, extends for 32 miles along the seacoast of the north-eastern extremity of Cape Breton island, the measures having a width on land of about 6 miles. The aggregate thickness of coal in the several workable seams varies from 13½ feet in the Dauphin area to 44½ feet at Sydney harbour, the individual seams ranging from 3 to 9 feet in thickness. The strata are almost free from faults and have a gentle dip seaward, so that a large area of submarine coal is available.

Inverness.—The coal fields of Inverness county include a series of narrow areas extending for over 50 miles along the western shore of Cape Breton island. The areas of the productive measures form part of the eastern rim of a basin, the greater part of which has been removed by erosion. The Productive Measures, on their easterly side, are underlain by the Millstone-Grit and various formations of the Lower Carboniferous, which in turn rest on Cambrian rocks. In various localities seams from 2 to 12 feet in thickness occur, usually with rather low angles of dip.

Pictou.—The Pictou coal field, on the mainland ,has an area of about 25 square miles and has been producing coal for more than 90 years. Though the field is small, it comprises some of the largest seams in Eastern America, the main seam in the Stellarton area having a thickness of 40 feet while several others in the vicinity vary in thickness from 10 to 20 feet. The geological structure of the district is very intricate; faults often of considerable magnitude are numerous and the productive measures are almost completely girdled by them.

Cumberland.—In Cumberland county there are two productive areas of which one situated on the coast is called the Joggins area while the other is at Springhill, about 15 miles east of the first. In the Joggins area, the coal seams occur along one side of a very broad synclinal basin of Carboniferous measures, which toward the centre of the basin are overlapped by the Permian beds. In the western portion of the Joggins area the seams are comparatively thin, the principal one worked showing about 5 feet of coal and the lower seam somewhat less. In the remarkable section of strata exposed along the coast of Chignecto bay, over 70 coal seams outcrop. Several seams are 5 to 6 feet thick, one measuring 9½ feet but having 2½ feet of shale partings.

In the Springhill basin the geological structure is less simple and the strata dip more steeply than in the Joggins area, the seams being worked along slopes of 30°. There are a number of seams, some of which are over 10 feet thick. They have been worked for more than 40 years, while several others of workable size have been developed to some extent.

New Brunswick.—In New Brunswick the Carboniferous rocks have a wide distribution and comprise an area of more than 10,000 square miles; their coal seams outcrop at many points throughout this area. Near the upper portion of

Grand Lake, where the coal has the greatest thickness, mining has been carried on for more than a century. The coal production in New Brunswick increased from 44,780 tons in 1912 to 287,513 tons in 1922. The output of 268,212 tons reached in 1918 was the highest yearly production previously attained by the province.

Saskatchewan.—The coal-bearing areas lie principally in the southern part, and are being mined in the vicinity of Estevan on the Souris river. The elevation known as the Coteau is also composed of coal-bearing rocks which continue westward in the Wood mountains and the Cypress hills. This area contains possibly 4,000 square miles within which coal may be found. Between the two branches of the Saskatchewan river is an area of possible coal-bearing rocks.

Alberta.—The province is liberally supplied with coal areas. The coal is found in three distinct horizons in the Cretaceous, separated by shales of marine origin. The lowest, named the Kootenay, is practically the base of the formation and is considered Cretaceous from its fossil flora. The Belly river formation is the next in which there appear to have been land conditions of sufficiently long duration for the growth of material to form coal beds. The coal horizon of the Belly river contains but a few workable seams, but its areal distribution makes it important. The third coal horizon, known as the Edmonton, is at the top of the Cretaceous. The upper part in Alberta is a fresh water deposit and is not distinctly coal-bearing; the lower contains many lignite seams.

Belly River Formation.—The coals that belong to the Belly River horizon grade generally between lignite and bituminous and are found over the enormous area of about 16,000 square miles. The formation outcrops over a great curving band 125 miles broad at the international boundary and stretching northward to the Red Deer river, a tributary of the South Saskatchewan. In the south the beds outcrop at many points, in places, as along the Saskatchewan, in seams 18 feet thick, while at Lethbridge and Taber more than 800,000 tons of a somewhat high grade lignite are annually produced from seams of the Belly river measures. The probable reserves of the formation, including the seams at the top of the horizon, continuing beneath the Edmonton formation, are 189,450 million tons.

Edmonton Formation.—The coals of the formation are generally lignites, but in the foothills grade up to bituminous. The formation of Tertiary age with the overlying Paskapoo occupies an immense basin gradually widening toward the north and reaching from the international boundary almost to Lesser Slave lake. Coal seams outcrop in the Edmonton on both sides of the area of younger Paskapoo, lying basin-like in the centre of the Tertiary area. The lignites have been found outcropping as far north as Edmonton, one of the principal mining centres of this coal horizon. The actual reserve for the formation, the calculation being based on the actual thickness and extent is 111,097 million tons, underlying an area of 9,590 square miles. The additional probable reserve is 268,161 million tons, contained in an area of 20,340 square miles.

Kootenay Formation.—As the coals in this horizon are in the lower measures and have been subjected to greater load, they are as would be expected, of higher grade, but as the exposures are all in the broken and faulted blocks of the mountain area, a much greater change has taken place than is common in undisturbed beds. The coals range from coking coals to anthracites. The anthracite area is that of the Cascade basin, the greatest alteration being found near Banff. The Cascade area extends from south of Kananaskis river to within about twelve miles of the Saskatchewan. It is estimated to contain 769 million tons of anthracite and 2,009 million tons of the softer grades. Other important coal

areas are Coleman, Blairmore-Frank, Livingstone, Moose Mountain, Palliser, Costigan, Sheep Creek and the Bighorn Basin. Referring to seams of one foot or over to a depth of 4,000 feet in the Kootenay formation, the actual reserve, being a calculation based on actual thickness and extent, is 2,696 million tons while the additional probable reserves are 43,123 million tons.

The actual reserves of the province are 386,373 million tons and the probable reserves are 673,554 million tons.

British Columbia.—While the coals of Nova Scotia and of the eastern half of the United States are derived from the Carboniferous formation, those of the Pacific slope occur in association with much later rocks referable to the Mesozoic and Tertiary periods. In British Columbia the formations known to contain coal or lignites are the Cretaceous and the Tertiary. The coal occurs in at least two distinct stages of the Cretaceous. The lower includes the coal measures of Queen Charlotte island, of Quatsino sound, Vancouver island and of Crowsnest pass in the Rocky mountains. The upper includes the coal measures of Nanaimo and Comox, and probably also those of Suquash and other localities. The character of the coals, while dependent to a certain extent on its stratigraphical position, depends largely upon the conditions of metamorphism to which they, with the rocks containing them, have been subjected. This is well illustrated by the Tertiary coal in the interior basins of British Columbia being highly bituminous instead of lignitic, while on the Queen Charlotte islands the Cretaceous coals range from high grade bituminous to broken anthracite. There are three main districts in which coal mining operations are being actively pursued. These are the Crowsnest pass in the eastern part of the province, the Nicola valley district in the central part and the east coast of Vancouver island.

The Crowsnest Pass.—The coalfield is situated immediately west of the summit of the Rocky mountains in Crowsnest pass. By taking the area covered by the coal measures as being 230 square miles and assuming a workable thickness of coal seams of 100 feet, McEvoy arrives at 22,595 million tons as the quantity of total available coal in the area. The opening of coal mines in this field marked an epoch in the development of the province, as the smelting industry of the Kootenays had to depend previously in a great measure on coke from the coast coal mines.

Nicola Valley.—The coalfield is situated to the south of Nicola lake in the Kamloops district. Although not as extensive as the Crowsnest field or the Vancouver island field, it is yet of great economic importance. Produced mid-way between the more extensive fields, the coal of Nicola valley is manifestly destined to find a market in a considerable part of central British Columbia.

Telwka Valley.—In the northern part of the province, a field which attracts great interest, owing to its proximity to the line of the Grand Trunk Pacific railway, is the Telwka valley. Some of these areas are of considerable extent and have been proven to contain coal varying from a bituminous to a semi-anthracite in beds of a workable thickness.

Groundhog Mountain.—The Groundhog coalfield, about 140 miles by trail north from Hazelton near the headquarters of the west fork of the Skeena river, is also of great promise. The coal is anthracite or semi-anthracite in character. The field extends in a northwesterly direction about 75 miles and has a width in places of about 30 miles.

Vancouver Island.—The island has been the seat of the coal mining industry since 1836. In recent years its output has not only supplied a local demand but has been largely exported to the state of California. The active fields are

situated on the east coast of the island. The coal measures may be naturally divided into two distinct fields separated by a gap of twelve miles of crystalline rocks in the district of Nanoose. The northern area is the Comox field and the southern area the Nanaimo field. Another field, until recently quite undeveloped, exists in the vicinity of Suquash, about 125 miles to the north.

Queen Charlotte Islands.—Coal is also found in the Queen Charlotte islands, the most important coal bearing area in this group of islands being that found in a development of Cretaceous rocks on Graham island, the most northerly of the group.

30.—Coal Resources of Canada, by Provinces and Classes of Coal.[1]

(In metric tons of 2,204 pounds.)

Province or District.	Including seams of 1 foot or over to a depth of 4,000 feet.					Including seams of 2 feet and over, at depths between 4,000 and 6,000 feet.	
	Actual Reserve.			Probable Reserve.		Probable Reserve.	
	Calculation based on actual thickness and extent.			Approximate estimate.		Approximate estimate.	
	Area, sq. miles.	Class of Coal.[2]	Thousands of tons.	Area, sq. miles.	Thousands of tons.	Area, sq. miles.	Thousands of tons.
Nova Scotia	174	B	2,188,151	204	4,911,817	73	2,639,000
New Brunswick	–	B	–	121	151,000	–	–
Ontario	–	L	–	10	25,000	–	–
Manitoba	–	L	–	48	160,000	–	–
Saskatchewan	306	L	2,412,000	13,100	57,400,000	–	–
Alberta	25,300	L	382,500,000	56,375	491,271,000	–	–
		B	3,223,800		182,183,600	203	12,700,000
		A & B	669,000		100,000	–	–
British Columbia	439	A & B	23,771,242	6,196	44,907,700	11	2,160,000
		L	60,000		5,136,000	–	–
Yukon	–	A & B	–	2,840	250,000	–	–
		L	–		4,690,000	–	–
Northwest Territories	–	L	–	300	4,800,000	–	–
Arctic Islands	–	B	–	6,000	6,000,000	–	–
Totals	**26,219**	–	**414,804,193**[3]	**85,194**	**801,986,117**	**287**	**17,499,000**

[1] See "Coal, Coke and By-products," published by the Imperial Mineral Resources Bureau.
[2] The coal of all classes mined in Alberta to 1911, amounting to 20,000,000 tons, has been deducted.
[3] A=Anthracite, B=Bituminous, L=Lignite.

World's Production.—The total known production of the world in 1921 amounted to about 1,138·3 million long tons, toward which Canada contributed 13·8 million tons or about 1·2 p.c. Table **31** shows the production of the British Empire and the chief foreign countries in units of 1,000 long tons during each of the years from 1913 to 1921 where the returns were available.

31.—Coal Production in the Principal Countries of the World, 1913-1921.

(In thousands of long tons of 2,240 pounds.)

BRITISH EMPIRE.

Years.	United Kingdom.	British India.	Canada.	Australia.	New Zealand.	Union of South Africa.
1913	287,431	16,208	13,404	12,418	1,888	9,583
1914	265,665	16,464	12,176	12,445	2,276	9,125
1915	253,208	17,104	11,846	11,415	2,209	8,977
1916	256,376	17,254	12,932	9,812	2,257	10,966
1917	248,500	18,213	12,542	10,232	2,068	11,444
1918	227,749	20,722	13,373	10,949	2,034	10,692
1919	229,780	22,628	12,131	10,525	1,848	9,162
1920	231,000	17,640	14,800	13,000	1,800	10,200
1921	169,720	18,964	13,777	13,287	–	10,501

31.—Coal Production in the Principal Countries of the World, 1913 to 1921—concluded.

(In thousands of long tons of 2,240 pounds.)

Years.	FOREIGN COUNTRIES.							
	Germany.	Belgium.	France.	Czecho-Slovakia.	Poland.	Nether-lands.	Japan.	United States.
1913	274,264	22,474	40,188	–	–	1,843	20,973	508,893
1914	241,288	16,445	26,141	–	–	1,898	21,935	458,505
1915	230,889	13,950	19,219	–	–	2,226	20,161	474,660
1916	246,606	16,592	20,968	–	–	2,613	22,534	526,873
1917	258,639	14,691	28,427	–	–	3,001	25,938	581,609
1918	256,979	13,668	25,899	–	–	4,804	27,579	605,546
1919	199,160	18,190	19,645	27,000	–	5,271	30,000	487,638
1920	239,000	21,000	34,100	30,300	6,300	5,200	28,800	576,500
1921	273,009	22,163	29,450	33,233	7,971	4,360	24,900	455,927

2.—Asbestos.

Canada produces more asbestos than any other country. The value of the annual output of asbestos has increased from less than $25,000 in 1880 to $5,552,723 in 1922, so that aside from coal, asbestos is now one of the most important non-metallic products. In 1921, the world's production of asbestos amounted to 140,000 tons; of this tonnage Canada produced 92,761 tons or 66.2 p.c., Rhodesia, 19,529 tons or 14 p.c., South Africa, 5,387 tons or 3.8 p.c., Russia, 17,138 tons and the United States, 831 tons.

Quebec.—The Eastern Townships of the province have for many years been the most productive asbestos mining area in the world. The workable deposits of chief importance are confined to a serpentine belt near Black lake and Thetford. The serpentine of this belt generally occurs as disconnected masses, but occasionally it forms mountain ridges of considerable altitude, notably in the vicinity of Black lake. The veins of asbestos traverse the serpentine in all directions, and as a rule the fibre lies at right angles to the walls of the veins. The veins vary in width from ¼ inch to ½ inch, and occasionally fibre has been obtained several inches in length. The fibre is of good quality and well adapted for spinning. Included in the Thetford and Black lake area are the East Broughton deposits, where the serpentine occurs enclosed in a highly quartzose slate, probably of pre-Cambrian age. In the Danville area, asbestos up to ½ inch in length occurs abundantly, and the whole of the serpentine is impregnated with fine short fibre, giving a first class milling material.

Open-cut methods of mining are adopted almost invariably throughout the Canadian asbestos fields. Nearly all the mining companies have installed machinery for the crushing, fibrizing, screening and grading of the mine product.

32.—Production of Asbestos and Asbestic in Canada, calendar years 1909 to 1922.

Years.	Asbestos.		Asbestic.		Total.	
	Tons.	$	Tons.	$	Tons.	$
1909	63,349	2,284,587	23,951	17,188	87,300	2,301,775
1910	77,508	2,555,974	24,707	17,629	102,215	2,573,603
1911	101,393	2,922,062	26,021	21,046	127,414	2,943,108
1912	111,561	3,117,572	24,740	19,707	136,301	3,137,279
1913	136,951	3,830,909	24,135	19,016	161,086	3,849,925
1914	96,542	2,892,266	21,031	17,540	117,573	2,909,806
1915	111,142	3,553,166	25,700	21,819	136,842	3,574,985
1916	133,439	5,199,797	20,710	29,072	154,149	5,228,869
1917	135,502	7,183,099	18,279	47,284	153,781	7,230,383
1918	141,462	8,936,804	16,797	33,993	158,259	8,970,797
1919	136,765	10,909,452	22,471	65,917	159,236	10,975,369
1920	167,731	13,677,841	20,956	57,601	188,687	13,735,442
1921	92,761	4,906,230	[1]	[1]	92,761	4,906,230
1922	163,706	5,552,723	[1]	[1]	163,706	5,552,723

[1]Included with asbestos.

3.—Other Non-Metallic Minerals.

Natural Gas.—The production of natural gas has increased in value from $1,300,000 in 1910 to $5,847,000 in 1922. The producing gas wells are situated in the counties of Welland, Haldimand, Norfolk, Kent, Essex and Bruce, in Ontario; at Moncton, New Brunswick, and at Medicine Hat and vicinity, in Alberta. The quantity of gas sold or used in 1922 was over 14,682,000 million feet. Of the total value, Ontario was credited with about 55 p.c.

Petroleum.—The production of crude petroleum comes almost entirely from the province of Ontario. The production of Canada in 1922 was 179,068 barrels, of which 164,732 barrels came from Ontario and 7,778 barrels from New Brunswick. The principal producing oil fields are situated in the peninsula of southwestern Ontario between lake Huron and lake Erie. The oil districts are all situated within an area underlain by Devonian strata, usually in an anticlinal axis, and the petroleum is largely obtained from the horizons in the Onondaga at varying depths in the different localities.

Gypsum.—Many large deposits of gypsum occur throughout Canada, but the production is chiefly from Windsor, Nova Scotia, Hillsborough, New Brunswick, Paris, Ontario, and Gypsumville, Manitoba. The Hillsborough deposit of gypsum in New Brunswick is of very high grade. There are also extensive deposits in British Columbia which are being worked by one company only. Nearly 50 p.c. of Canada's production is exported in crude forms. Beds of gypsum are associated with the lower Carboniferous limestones in New Brunswick and Nova Scotia. The mineral occurs in Ontario in the salt-bearing Salina formation of upper Silurian age.

Salt.—Practically the whole of the production comes from Windsor, Ontario, but the Malagash deposits in Nova Scotia are claiming much attention. The deposits of Ontario occur in the Salina formation of upper Silurian age, in which the beds of the mineral sometimes reach a thickness of 250 feet. The production in 1922 was 181,794 tons, as compared with 164,658 tons in 1921.

4.—Clay Products and Structural Materials.

Brick and Tile.—The widespread clays of glacial and post-glacial age that often completely hide the underlying rocks over considerable areas of the St. Lawrence lowlands, have furnished the material for numerous brick and tile industries, both in Ontario and Quebec. The brick production in 1922 was about 401·8 million, as compared with 306·8 million in 1921.

Cement.—The raw materials for the manufacture of Portland cement are abundantly displayed in the St. Lawrence lowlands, and support a number of large industries. Some of these utilize marl-deposits of calcium carbonate in lakes scattered over the uneven surface of the post-glacial deposits and the clay beds of these deposits, while others use Palæozoic limestone. The production of cement increased from 5,752,885 barrels in 1921 to 6,943,972 barrels in the following year.

33.—Production of Cement in Canada, calendar years 1902-1922.

Years.	Natural rock cement.		Portland cement.		Total cement.	
	brl.	$	brl.	$	brl.	$
1902	127,931	98,932	594,594	1,028,618	722,525	1,127,550
1903	92,252	74,655	627,741	1,150,592	719,993	1,225,247
1904	56,814	50,247	910,358	1,287,992	967,172	1,338,239
1905	14,184	10,274	1,346,548	1,913,740	1,360,732	1,924,014
1906	8,610	6,052	2,119,764	3,164,807	2,128,374	3,170,859
1907	5,775	4,043	2,436,093	3,777,328	2,441,868	3,781,371
1908	1,044	815	2,665,289	3,709,139	2,666,333	3,709,954
1909	–	–	4,067,709	5,345,802	4,067,709	5,345,802
1910	–	–	4,753,975	6,412,215	4,753,975	6,412,215
1911	–	–	5,692,915	7,644,537	5,692,915	7,644,537
1912	–	–	7,132,732	9,106,556	7,132,732	9,106,556
1913	–	–	8,658,805	11,019,418	8,658,805	11,019,418
1914	–	–	7,172,480	9,187,924	7,172,480	9,187,924
1915	–	–	5,681,032	6,977,024	5,681,032	6,977,024
1916	–	–	5,369,560	6,547,728	5,369,560	6,547,728
1917	–	–	4,768,488	7,724,246	4,768,488	7,724,246
1918	–	–	3,591,481	7,076,503	3,591,481	7,076,503
1919	–	–	4,995,257	9,802,433	4,995,257	9,802,433
1920	–	–	6,651,980	14,798,070	6,651,980	14,798,070
1921	–	–	5,752,885	14,195,143	5,752,885	14,195,143
1922	–	–	6,943,972	15,438,481	6,943,972	15,438,481

34.—Imports into Canada of Portland Cement, fiscal years 1898-1923.

Fiscal Years.	Quantity.	Value.	Duty paid.	Fiscal Years.	Quantity.	Value.	Duty paid.
	Cwt.	$	$		Cwt.	$	$
1898	1,073,058	355,264	121,969	1911	1,283,721	494,081	138,969
1899	1,300,424	467,994	147,146	1912	2,592,025	936,425	292,914
1900	1,301,361	498,607	147,067	1913	4,958,814	1,955,177	597,727
1901	1,612,432	654,595	179,550	1914	709,104	322,564	69,658
1902	1,971,616	833,657	233,754	1915	287,402	123,613	26,034
1903	2,316,853	868,131	271,004	1916	94,136	37,048	9,382
1904	2,476,388	995,017	290,778	1917	63,074	29,719	6,307
1905	3,228,394	1,234,649	384,866	1918	26,243	17,417	2,624
1906	2,848,582	963,839	328,342	1919	26,687	26,437	2,667
1907[1]	1,551,493	523,120	162,250	1920	45,458	47,156	3,720
1908	2,427,381	852,041	259,549	1921	132,187	153,513	10,502
1909	1,460,850	475,676	159,077	1922	24,952	34,304	1,920
1910	490,809	158,487	47,981	1923	112,610	90,849	8,494

[1]Nine months.

5.—Number of Mines, Capital, Labour, Wages, etc., by principal Groups.

A survey of the industrial organization, for the purpose of showing the magnitude of the different mineral industries and their growth or decline, was made a part of the annual census of mineral production in 1921. Aside from the canvass forming a section of the previous decennial censuses, the annual statistics in recent years were confined chiefly to a presentation of the quantity and value production of each of the minerals. The additional data include the geographic distribution, the land tenure, character of organization, distribution of ownership, scale of operation, persons engaged and the power used in mining enterprises. In the eleven year period from 1910 to 1921, the number of mines or works increased by 120 p.c., the wages paid by 81 p.c. and the value of production by 39 p.c.

The importance of the mineral production in Canada was indicated by a capital of $560 million, invested in lands and buildings, materials on hand, trading accounts, etc., an employment of 61,000 persons to whom were paid $79 million in salaries and wages, an expenditure of $14 million for fuel and of $47 million for miscellaneous expenses.

Metallic Mineral Industries.—The analysis of the metallic group is divided into two sections treating with mining and milling and with elementary metallurgy respectively. The metal mining and milling section included 367 companies operating 397 establishments, while nine metallurgical companies owned fourteen active plants. The metallic group employed 851 salaried persons and 11,282 wage earners. The remuneration included nearly $2,000,000 in salaries and $14·3 million in wages. The capital employed was $200,000,000, while the net value of bullion, ore, concentrates or residues shipped from the mines and products made by the smelters was about $48·1 million.

Employment and Number of Operators.—Alluvial gold mining was actively prosecuted in the Yukon and British Columbia by 195 operators comprising 18 corporations, 40 partnerships and 137 individuals. The number of wage-earners engaged in placer mining was 428. The total production was $1·58 million of which $1·34 million was credited to the Yukon. In the 73 mines and mills of the auriferous quartz industry the average employment was 3,651 wage-earners of whom 2,104 were working underground. Eleven copper-gold-silver mines shipped ore in 1921, only one of which, the Weedon in Quebec, was located outside of British Columbia. The wage-earners in the industry, including five non-producing mines and two mills, numbered 1,141. The nickel-copper industry, including seven mines, three smelters and two refineries, engaged 195 salaried employees with a remuneration of $502,991. Referring to the wage earners, the total man-days work for the whole industry was 448,841, for which $1,979,273 was paid in wages, making the average earnings about $4.41 per man-day. Eighteen companies were active and twenty-two mines were operated in the silver-cobalt industry. In addition, eight idle mines made small shipments of ore from their dumps or of crude bullion recovered in previous years. Wage earners to the number of 612 working underground performed 176,698 man-days work, while 234 men working at the surface in the mining section performed 69,101 man-days work. The employment in the mill section was 275 men performing 92,002 man-days work. With the exception of one shipping mine each in Quebec, Ontario and the Yukon, the silver-lead-zinc industry was dependent on the fifty-four shipping mines of British Columbia. Eight mills, six of which were in British Columbia, were also operated by the industry. The employment included 71 men receiving salaries of $123,546 and 715 men receiving $841,025 in wages. The metallurgical industry consisted of eleven companies, two of whom operated in British Columbia, one in New Brunswick and the remainder in Ontario. In view of the general depression in 1921, most of the companies curtailed their operations, which included in normal times fourteen smelting and refining plants. Salaried employees to the number of 315 received remuneration of $737,657 and 3,367 wage-earners were paid $3,669,300. The estimated cost of ores, etc. treated in the smelters was $8,400,000, while the products made by the metallurgical industry were valued at $23,732,277.

Non-metallic Minerals.—The non-metallic minerals group consisted of fifteen industries, of which the coal and asbestos mining were of chief interest, while the natural gas, gypsum and salt producing industries were also of importance. The group consisted of 718 active concerns operating 5,399 wells and mines. The employ-

ment was 2,057 persons on salaries receiving a remuneration of $4·5 million and 35,656 wage-earners, who were paid $47·8 million. The capital employed was $265·7 million and the aggregate value of production was $87·8 million.

Coal Mining.—Coal mining was carried on in Canada during 1921 in 396 mines which were operated by 168 corporations, 79 partnerships and 102 individuals. The incorporated companies operated 215 mines. The area of mining properties in Nova Scotia was 210,827 acres, Alberta 194,365 acres and British Columbia 284,578 acres. The total length of underground workings in Nova Scotia was 142,955 feet, in Alberta, 828,700 feet, and British Columbia, 399,388, the total for Canada being 1,433,331 feet. The industry gave employment to more than 30,000 men and the wage bill for the year amounted to $42,758,471. In addition, $3,718,238 was paid to salaried employees numbering 1,600 persons.

Asbestos.—The capital employed in the asbestos mining industry of Quebec was $41·3 million. The par value of the paid-up securities in 1921 was $29·2 million of which $19·7 million was owned in Canada. The salaries and wages paid were $2·7 million and the total value of production was $4·9 million. The average number of wage-earners in 1920 was 3,606 as compared with 2,570 in 1921.

Other Non-metallic Industries.—Other industries of importance from an employment standpoint were gypsum mining with 766 wage-earners, natural gas production with 760 wage-earners and salt mining with an average employment of 297 men on wages.

Structural Materials and Clay Products.—The average number of wage-earners in the group was 10,038 and the salaried employees numbered 920, the salary and wage account being $10·6 million. The average number on the payrolls of the cement industry increased from 2,301 employees in 1920 to 2,751 in 1921. The chief division of the clay products industry consisted of 202 establishments actively engaged in the manufacture of brick and tile. In the whole industry, the average daily wage for all workers was $4.06 per day, there having been a total of 784,279 days' work performed for which $3,187,493 was paid.

35.—Summary of Principal Statistics Relative to Mining, Metallurgical, Structural Materials and Clay Products Industries Operating Plants, 1921.

Groups.	Number of active operators.	Number of operating plants or mines.	Capital actually employed.	Number of salaried employees.	Number of wage-earners.	Net value of bullion, ore concentrates or residues shipped from the mines and products made by the smelters.
Metallics.			$			$
Auriferous quartz mining and milling	57	59	48,043,363	238	3,651	16,689,784
Silver-cobalt mining and milling	33	39	31,198,418	103	1,121	6,316,812
Silver-lead-zinc mining and milling	61	72	9,888,421[1]	71	718	2,177,053
Copper-gold-silver mining and milling	14	18	5,256,051[2]	85	1,137	2,589,314
Placer mining and milling	197	197	10,703,650[7]	–	428[8]	1,576,222[5]
Nickel-copper mining and milling	3	8	8,107,245	39	816	1,575,558
Iron mining and briquetting	4	4	4,604,048	–	44	230,164
Iron blast furnaces	–	–	–	–	–	1,646,790[4]
Metallurgical works	9	14[3]	82,206,253	315	3,367	15,332,277
Total for Metallics	**378**	**411**	**200,007,449**	**851**	**11,282**	**48,133,974**

NOTE:—For notes see foot of page 400.

35.—Summary of Principal Statistics Relative to Mining, Metallurgical, Structural Materials and Clay Products Industries Operating Plants, 1921—concluded.

Groups.	Number of active operators.	Number of operating plants or mines.	Capital actually employed.	Number of salaried employees.	Number of wage-earners.	Net value of bullion, ore concentrates or residues shipped from the mines and products made by the smelters.
			$			$
Non-metallics.						
Asbestos	15	18	41,357,161	124	2,570	4,906,230
Coal mining	349	396	176,991,495	1,626	30,223	72,451,656
Feldspar	23	23	484,633	12	131	230,754
Fluorspar	3	3	163,257	4	77	136,267
Grindstones	3	3	286,993	5	50	64,067
Gypsum	11	12	3,849,776	36	766	1,785,538
Magnesite	4	4	2,108,227	10	71	81,320
Mica	20	20	576,237	5	99	70,063
Natural gas	104	2,022[6]	30,368,478	125	760	4,594,164
Oxides, iron	4	4	207,567	3	29	93,610
Petroleum	120	2,828[6]	3,214,159	19	171	641,533
Quartz	11	11	940,087	8	86	312,947
Salt	12	13	2,267,708	53	277	1,673,685
Talc	4	4	487,073	5	34	144,565
All other non-metallics[8]	35	38	2,398,742	22	312	656,283
Total for Non-metallics	**718**	**5,399**	**265,701,593**	**2,057**	**35,656**	**87,842,682**
Structural Materials and Clay Products.						
Clay products	216	220	28,515,928	288	4,118	8,857,818
Cement	7	14	49,160,180	343	2,408	14,195,143
Lime	59	66	4,990,969	87	844	2,781,197
All others[9]	375	375[10]	11,138,035	202	2,668	8,903,270
Total for Structural Materials and Clay Products	**657**	**675**	**93,805,112**	**920**	**10,038**	**34,737,428**
Summary by Classes:						
Metallics	378	411	200,007,449	851	11,282	48,133,974
Non-metallics	718	5,399	265,701,593	2,057	35,656	87,842,682
Structural materials and clay products	657	675	93,805,112	920	10,038	34,737,428
Grand total	**1,753**	**6,485**	**559,514,154**	**3,828**	**56,976**	**170,714,084**
Summary by Provinces:						
Nova Scotia	71	109	82,283,644	625	13,504	–
New Brunswick	35	71	2,985,382	66	914	–
Quebec	164	169	81,494,918	507	5,805	–
Ontario	741	5,312	188,769,764	1,114	13,151	–
Manitoba	27	28	5,343,706	51	752	–
Saskatchewan	65	65	4,761,177	73	721	–
Alberta	302	357	73,603,005	762	10,328	–
British Columbia	177	203	109,030,712	625	10,840	–
Yukon	159	159	11,241,846	5	461	–
Total for Canada	**1,741**[11]	**6,473**[11]	**559,514,154**	**3,828**	**56,976**	–

[1] Excluding capital invested by Consolidated Mining and Smelting Company, Trail, and Kingdon Smelter, Galetta.

[2] Excluding capital invested by Granby Consolidated Mining and Smelting and Power Company, Anvox.

[3] Includes 3 silver smelters South Ontario: 5 plants nickel-copper smelters and refineries in Ontario and Quebec 6 plants copper, lead and zinc smelters, Ontario and British Columbia, and refineries in British Columbia and Ontario.

[4] Represents value of pig iron made from Canadian ore, deducting the net value of ores treated.

[5] Includes production of Yukon Territory, 82,394 crude ounces valued at $16.30 per ounce and production for British Columbia valued at $233,200.

[6] Number of wells.

[7] Incorporated companies over Yukon Territory.

[8] Includes actinolite, barytes, chromite, corundum, magnesium, sulphate, manganese, mineral waters, peat, pyrites, sodium sulphate, and tripolite.

[9] Includes stone quarries and sand and gravel.

[10] Number of active operators only.

[11] Does not include railway ballast operators.

VII.—WATER POWERS.

1.—Water Powers of Canada.[1]

Prior to the world war, the price of fuels was so low that ample motive power could be secured through their agency at such reasonable cost that the development of water power only took place where the natural facilities greatly favoured it or where coal costs were relatively high. With the advent of war, coal costs soared and supplies became uncertain; at the same time, power requirements became vastly greater and stimulated the development of water power. The return of peace has not produced any marked amelioration in the coal situation, while the gradual revival of industrial activity is steadily increasing the demand for power which the end of the war had considerably reduced.

At the present time, water power development is active wherever conditions are favourable, and there can be little doubt that this activity will be increased with the improvement of financial and industrial conditions.

The United States Geological Survey, in 1921, issued an atlas illustrating the water power resources of the world, which it places at 439,000,000 horsepower, 43·3 p.c. of which are in Africa and 14·1 p.c. in North America.

In Table 1, which is based upon the above mentioned atlas and revised in accordance with additions authentically recorded since its publication, are listed the more important water power countries, together with their population and developed water power. It is interesting to note that, with the exception of Norway and Switzerland, Canada has the greatest per capita development, and next to the United States, the greatest actual development.

1.—Developed Water Power of Leading Countries, 1922.

Country.	Population (in thousands).	Developed Water Power.	
		H.P. (in thousands).	Per 1,000 Population.
Canada	8,788	2,974	338
France	39,300	2,100	54
Germany	59,860	1,000	17
Italy	38,840	1,650	43
Japan	55,960	1,500	27
Norway	2,650	1,654	624
Sweden	5,900	1,560	264
Switzerland	3,880	1,531	395
United States	105,700	9,540	90

With this brief reference to the water powers of the world, we may proceed to a more particular consideration and analysis of those of the Dominion. It has already been shown that Canada is richly endowed with water power resources and is in the forefront as regards their utilization. In fact, practically every large industrial centre throughout the Dominion is now served with hydro-electric energy and has within easy transmission distance ample reserves for the future. Over 90 p.c. of the prime motive power of the central electric stations of Canada is hydro power. The main spring of industrial progress in the central provinces, which have no indigenous coal supplies, is water power. Table 2 shows the distribution of available and developed power in Canada.

[1]By J. B. Challies, C.E., M.E.I.C., Director, Dominion Water Power Branch, Department of the Interior, Ottawa.

2.—Available and Developed Water Power in Canada, Feb. 1, 1923.

Provinces.	Available 24-hour Power at 80 p.c. efficiency.		Turbine installation.
	At ordinary minimum flow.	At estimated flow for maximum development (dependable for 6 months).	
	h.p.	h.p.	h.p.
British Columbia	1,931,142	5,103,460	328,977
Alberta	475,281	1,137,505	33,067
Saskatchewan	513,481	1,087,756	–
Manitoba	3,270,491	5,769,444	134,025
Ontario	4,950,300	6,808,190	1,299,230
Quebec	6,915,244	11,640,052	1,073,883
New Brunswick	50,406	120,807	42,039
Nova Scotia	20,751	128,264	47,100
Prince Edward Island	3,000	5,270	2,239
Yukon and Northwest Territories	125,220	275,250	13,199
Total	**18,255,316**	**32,075,998**	**2,973,759**

The figures in columns 2 and 3 in the above table represent 24-hr. power, and are based upon rapids, falls and power sites of which the actual existent drop or the head possible of concentration, is definitely known or at least well established. Innumerable rapids and falls of greater or lesser power capacity, which are not as yet recorded, are scattered on rivers and streams from coast to coast and will only become available for tabulation as more detailed survey work is undertaken and completed. This is particularly true of the less explored northern districts. Nor is any consideration given to the power concentrations which are feasible on rivers and streams of gradual gradient, where economic heads may be created by the construction of power dams, excepting only at such points as definite studies have been carried out and the results made matters of record.

The figures in column 4 represent the actual water wheels installed throughout the Dominion. These figures should not be placed in direct comparison with the available power figures in columns 2 and 3 for the purpose of deducing therefrom the percentage of the available water power resources developed to date. The actual water wheel installation throughout the Dominion averages 30 p.c. greater than corresponding maximum available power figures calculated as in column 3. The figures quoted above, therefore, indicate that the "at present recorded water power resources" of the Dominion will permit of a turbine installation of 41,700,000 h.p. In other words, the present turbine installation represents only 7 p.c. of the present recorded water power resources.

The above figures may be said to represent the minimum water power possibilities of the Dominion.

As illustrative of this, the detailed analyses which have been made of the water power resources of the provinces of New Brunswick and Nova Scotia have disclosed most advantageous reservoir facilities for regulating stream flow. It is estimated that the two provinces possess within their respective borders 200,000 and 300,000 commercial h.p. These figures provide for a diversity factor between installed power and consumers' demands.

Table 3 analyses the developed water power, and is interesting in that it shows the extent to which the great pulp and paper industry of the Dominion owes its development to water power.

The statistics concerning the central station industry are further analysed in Table 4. The territory served by and the primary power installed in central stations are graphically indicated on the map facing page 390 and the diagram facing page 392 of the 1921 Year Book, to which the reader is referred. The statistics concerning the pulp and paper industry are analysed in Table 5.

During 1922, installations have been made which amount to practically 240,000 h.p., this figure including both new construction and the erection of new turbines and generators in existing water power stations, but excluding 190,000 h.p. installed during 1921 but only brought into operation in 1922. At the present time there are new developments either in course of construction or actively projected, the ultimate capacity of which is approximately 1,000,000 h.p. There is every indication that for a long time to come the development of water power in Canada will make great and continued progress.

3.—Developed Water Power in Canada, Feb. 1, 1923.

Provinces.	Turbine Installation in H.P.				
	In Central Stations.[1]	In Pulp and Paper Mills.[2]	In Other Industries.[3]	Total.[4]	Per 1,000 Population.[5]
British Columbia	227,401	48,800	52,776	328,977	627
Alberta	32,380	–	687	33,067	56
Saskatchewan	–	–	–	–	–
Manitoba	117,625	–	16,400	134,025	220
Ontario	1,018,853	171,024	109,353	1,299,230	443
Quebec	761,480	231,737	80,666	1,073,883	455
New Brunswick	21,113	14,668	6,258	42,039	108
Nova Scotia	15,346	17,999	13,755	47,100	90
Prince Edward Island	288	–	1,951	2,239	25
Yukon	10,000	–	3,199	13,199	3,175
Canada	**2,204,486**	**484,228**	**285,045**	**2,973,759**	**338**

[1] Includes only hydro-electric stations which develop power for sale. [2] Includes only water power actually developed by pulp and paper companies. In addition to this total, pulp and paper companies purchase from the hydro power central stations totalled in column 1, 72,122 h.p. in Ontario and 88,455 h.p. in Quebec. The total hydro power utilized in the pulp and paper industry is therefore 644,805 h.p. [3] Includes only water power actually developed in connection with industries other than the central station and the pulp and paper industries. These industries also purchase blocks of power from the central stations totalled in column 1. [4] Total of all turbines and water wheels installed in Canada. [5] Average of developed water power per 1,000 population.

4.—Developed Water Power in Canada Utilized in the Central Electric Station Industry, Feb. 1, 1923.

Provinces.	Commercial Stations.[1]			Municipal Stations.[2]			Total.				
		Installation.			Installation.			Installation.			
	No.	Generator K.V.A.	Turbine H.P.	No.	Generator K.V.A.	Turbine H.P.	No.	Generator K.V.A.	H.P. per turbine unit.	H.P. per station.	Total turbine H.P.
British Columbia	23	141,686	217,356	8	6,353	10,045	31	148,039	3,990	7,335	227,401
Alberta	3	22,250	32,380	–	–	–	3	22,250	2,491	10,793	32,380
Saskatchewan	–	–	–	–	–	–	–	–	–	–	–
Manitoba	3	37,350	50,400	2	57,312	67,225	5	94,662	5,881	23,525	117,625
Ontario	67	387,159	492,025	37	353,362	526,828	104	704,521	3,742	9,796	1,018,853
Quebec	77	582,413	743,855	16	13,202	17,625	93	595,615	3,541	8,188	761,480
New Brunswick	7	6,585	9,203	3	9,363	11,910	10	15,948	960	2,111	21,113
Nova Scotia	8	1,479	1,449	11	11,239	13,897	19	12,718	667	808	15,346
Prince Edward I	7	331	288	–	–	–	7	331	32	41	288
Yukon	1	6,000	10,000	–	–	–	1	6,000	5,000	10,000	10,000
Canada	**196**	**1,185,253**	**1,556,956**	**77**	**450,831**	**647,530**	**273**	**1,636,084**	**3,483**	**8,075**	**2,204,486**

[1]Commercial Stations include all privately owned. [2]Municipal Stations include all publicly owned.

NOTE.—Statistics in this table are based upon a census of the industry made by the Dominion Bureau of Statistics in co-operation with the Dominion Water Power Branch.

5.—Developed Water Power in Canada Utilized in the Pulp and Paper Industry, Feb. 1, 1923.

Provinces.	No. of Mills.	Installed and Purchased Power—H.P.					
		Turbine installation in the Industry.			Purchased Hydro-Electric Power.[4]	Total Hydro-Elec. (Col. 3+ Col. 5.)[5]	Total Utilized in the Industry (Col. 4+ Col. 5.)[6]
		Direct drive.[1]	Hydro-Electric drive.[2]	Total.[3]			
British Columbia	5	27,975	20,825	48,800	–	20,825	48,800
Ontario	41	89,830	81,194	171,024	72,122	153,316	243,146
Quebec	54	162,825	68,912	231,737	88,455	157,367	320,192
New Brunswick	3	2,368	12,300	14,668	–	12,300	14,668
Nova Scotia	10	17,919	80	17,999	–	80	17,999
Canada	**113**	**300,917**	**183,311**	**484,228**	**160,577**	**343,888**	**641,805**

[1] Includes all turbines actually installed in the industry and directly driving mill equipment. [2] Includes all turbines actually installed in the industry and transmitting power through electric drive. [3] Total of the turbine capacity actually installed in the industry. [4] Includes only power purchased from hydro-electric central stations for the operation of pulp and paper mills. [5] Total of the hydro-electric power used in the industry. [6] Total of the water power used in the industry.

2.—Central Electric Stations.

The development of the central electric power industry was greatly stimulated during the war by the urgent need of power for the manufacture of war munitions. In Table 6 will be found statistics of the number of central electric stations, capital invested, revenue from sale of power, total horse power, kilowatt hours generated and number of subscribers for the five-year period ended 1921, together with the number of persons employed and the amount expended for salaries and wages.

6.—Statistics of Central Electric Stations, calendar years 1917-1921.

Years.	Number of stations.	Capital invested.	Revenue from sale of power.	Total horse power.	Kilowatt hours generated.	Subscribers.	Persons employed.	Salaries and wages.
		$	$		(thousands.)			$
1917	666	356,004,168	44,536,848	1,844,571	–	–	8,847	7,777,715
1918	795	401,942,402	53,549,133	1,841,114	–	–	9,696	10,354,242
1919	805	416,512,010	57,853,392	1,907,135	5,497,204	–	9,656	11,487,132
1920	819	448,273,642	65,705,060	1,897,024	5,894,867	894,158	10,693	14,626,709
1921	857	484,669,451	73,376,580	1,977,857	5,614,132	973,212	10,714	15,234,678

The primary power equipment of all central electric stations aggregated 2,111,419 h.p. in 1921. This included water wheels and turbines, steam reciprocating engines and turbines and internal combustion engines. The hydraulic power machines greatly predominated over the other prime movers, being over 86 p.c. of the total capacity, with steam turbines coming second with 10 p.c., steam reciprocating engines third with 2·8 p.c. and internal combustion engines fourth with 0·8 p.c. Included in the above were steam engines and internal combustion engines with a capacity of 105,062 h.p. or 4·5 p.c. of the total, installed in water power stations as auxiliary or standby equipment and in some stations supplementing the water power. A total of 28,500 h.p. is available in non-generating stations for emergencies.

Central electric stations that have no water power, but are operated by steam and internal combustion engines, are on the whole small stations. Of the 187

steam reciprocating engines installed in central electric stations in 1921, only 22 in number or 12 p.c. were over 500 h.p., and the internal combustion engines averaged only 75 h.p. The steam turbines averaged over 2,100 h.p., with 4 units averaging 6,475 h.p., but there were only 43 steam turbines in the industry and these were confined to 22 stations, whereas the 604 water wheels and turbines averaged over 3,000 h.p.

The majority of the fuel using stations are primarily for lighting purposes, using the cheapest fuel procurable, generally local coal. In the prairie provinces, lignite coal is used for the steam engines and gasoline, oil distillates and producer gas for the internal combustion engines.

Of the 203 internal combustion engines in central electric stations in 1921, 107 or over 50 p.c. were in Saskatchewan, 15 p.c. in Alberta and 7 p.c. in Manitoba.

During 1921 the fuel stations produced an aggregate of 166,550,000 kilowatt hours at a cost for fuel of $2,550,437, or at an average of 1·53c. per kilowatt hour. This production was however, less than 3 p.c. of the total output, hydro-electric stations producing over 97 p.c. The auxiliary equipment in hydraulic stations consumed fuel valued at $474,493, but no record is available of their output of current.

The distribution by provinces of the electric energy generated in central electric stations throughout Canada is shown in Table 7 for the calendar years 1919, 1920 and 1921. In the latter year nearly 82 p.c. of the total generated electric energy was produced in the leading industrial provinces of Ontario and Quebec. From Table 9 it is seen that the total of electric energy exported in the fiscal year ended 1922 was 861,574,793 kilowatt hours or about 15·3 p.c. of the amount produced in the calendar year 1921, the nearest corresponding period.

7.—Electrical Energy Generated in the calendar years 1919, 1920 and 1921, by Provinces.

Provinces.	Kilowatt hours ("000" omitted).			Provinces.	Kilowatt hours ("000" omitted).		
	1919.	1920.	1921.		1919.	1920.	1921.
Prince Edward I.	840	1,075	1,271	Saskatchewan	43,035	47,866	54,295
Nova Scotia	35,088	33,731	34,330	Alberta	86,381	114,101	115,580
New Brunswick	18,341	25,632	30,351	British Columbia	397,880	485,177	499,095
Quebec	1,923,560	1,914,698	1,790,805	Yukon	9,538	8,332	8,927
Ontario	2,892,886	3,056,989	2,808,246				
Manitoba	170,655	207,131	271,232	**Totals**	**5,497,204**	**5,894,732**	**5,614,132**

Electric Light and Power.—Electric light and power companies are subject to registration and inspection under the Electricity Inspection Act, 1907 (6-7 Edw. VII, c. 14), and the production of electrical energy for export is regulated by the Electricity and Fluid Exportation Act, 1907 (6-7 Edw. VII, c. 16). Both Acts were administered by the Department of Inland Revenue until September 1, 1918, when, by Order in Council of June 3, 1918, their administration was transferred to the Department of Trade and Commerce. The statistics published in connection with these Acts are given in Tables 8 and 9. The number of electric light companies registered under the above-mentioned Act (see Table 8) has increased from 398 in 1910 to 1,096 in 1923, and the export of electric energy from 538,331,425 kilowatt hours in 1911 to 1,054,872,585 kilowatt hours in 1923.

8.—Number of Electric Light and Power Companies registered under the Electricity Inspection Act in the fiscal years 1914-1923.

Provinces.	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Prince Edward Island	5	6	6	7	7	8	11	11	11	12
Nova Scotia	37	35	35	38	36	37	37	45	55	59
New Brunswick	24	24	24	23	25	25	27	28	30	38
Quebec	70	53	61	79	94	133	140	184	216	226
Ontario	262	282	287	308	317	328	328	371	419	424
Manitoba	16	16	16	18	20	23	23	25	46	59
Saskatchewan	52	54	54	58	59	65	86	93	101	118
Alberta	39	36	36	41	45	47	53	46	65	76
British Columbia	57	55	55	60	60	62	63	77	82	84
Yukon	2	–	–	–	–	–	–	–	–	–
Totals	**564**	**561**	**574**	**632**	**663**	**728**	**768**	**880**	**1,025**	**1,096**

9.—Electrical Energy generated or produced for Export by Canada under authority of the Electricity and Fluid Exportation Act during the fiscal years 1918-1923.

Companies.	Electric Energy Generated or Produced for Export.					
	1918.	1919.	1920.	1921.	1922.	1923.
	k.w. hours.	k.w. hours.	k.w. hours.	k.w. hours.	k.w. hours.	k.w. hours.
Ontario Power Company of Niagara Falls, Niagara Falls, Ontario	321,768,400	316,921,400	319,362,000	328,256,600	304,224,400	295,849,500
Canadian Niagara Power Company, Niagara Falls, Ont.	256,005,960	254,633,727	203,601,550	172,251,210	82,264,000	244,948,750
Electrical Development Company (Toronto Power Co.), Niagara Falls, Ont.	138,062,000	141,511,000	108,237,000	102,884,000	102,122,000	103,922,550
Ontario and Minnesota Power Company, Fort Frances, Ont.	14,225,610	18,060,373	12,043,120	15,803,451	12,729,010	8,606,760
Maine and New Brunswick Electric Power Company, Ltd., Aroostook Falls, N.B.	4,190,996	4,954,661	6,122,638	7,877,398	8,460,291	10,713,925
British Columbia Electric Ry. Co., Vancouver, B.C.	327,832	290,530	354,780	385,678	419,692	467,353
Western Canada Power Co., Vancouver, B.C.	14,242,756	9,373,700	14,541,734	21,626,236	24,825,300	32,457,700
Sherbrooke Railway and Power Company, Sherbrooke, Que.	118,791	265,378	273,696	281,038	252,200	212,347
Cedars Rapids Mfg. and Power Co., Cedars Rapids, Que.	380,635,000	395,966,000	282,225,000	364,432,000	324,193,000	356,795,000
West Kootenay Power and Light Co., Ltd., Rossland, B.C.	1	1,301,200	2,997,000	5,774,400	2,084,900	898,700
Totals	**1,129,577,345**	**1,143,277,969**	**949,758,518**	**1,019,572,011**	**861,574,793**	**1,054,872,585**

3.—Public Ownership of Hydro-Electric Power.

When, in the early years of the twentieth century, it became evident that the development of hydro-electric power would become a "key industry" in Canada, more especially in its coalless central provinces of Ontario and Quebec, a strong movement arose in favour of conserving the water-powers of the country for the public benefit instead of allowing them to pass into the hands of private corpor-

ations. This "public ownership" movement developed especial strength in Ontario and finally led to the establishment of the Ontario Hydro-Electric Commission, the operating statistics of which are given below. In more recent years, Manitoba, Nova Scotia and New Brunswick have established Hydro-Electric Commissions on the model of the Ontario system. In Quebec, on the other hand, the development of hydro-electric power has been left in the hands of private corporations.

The Hydro-Electric Power Commission of Ontario.

Ontario.—The Hydro-electric scheme in Ontario had its beginning in 1903, when seven municipalities (Toronto, London, Brantford, Stratford, Woodstock, Ingersoll and Guelph) united in an investigation of the transmission possibilities of Niagara power. The Ontario Power Commission, which was created to report on the question, favoured the construction of a generating plant at Niagara Falls, and the Hydro-Electric Power Commission of Ontario was formed in 1906 to carry out its recommendations.

The capital required by the Commission for its transmission plant was provided by issues of bonds, guaranteed by the Government of Ontario, whose security was something more corporate than that of the associated municipalities. The contracts between the Commission and the municipalities called for repayment to the Government in thirty years.

When a municipality wishes to become part of the Hydro system, an engineer of the Commission reports on the cost of connection with the existing transmission lines. Then the question of joining the Hydro is voted upon under a civic by-law, which, if passed, is followed by another giving the necessary money. The local distribution system is financed by an issue of municipal debenture bonds to be retired in twenty years. Monthly bills are sent by the Commission to the municipalities, based upon an approximation to the yearly expense incurred in supplying power to the municipality, and at the year's end a thirteenth statement is sent, which brings the approximation to a true account. Like any efficient business concern, the Commission makes provision from the charges for power for sinking funds, repairs and replacements.

The Commission had been given authority to generate its own power, but chose rather to contract for power from the Ontario Power Company at $9.40 for the first 25,000 h.p. and $9.00 for any in addition up to 100,000 h.p. In 1916 power was purchased from the Canadian Niagara Power Company as well, and in the following year the Ontario Power Company was acquired through purchase of practically all the stock. It was at this time that the Queenston-Chippawa development was begun. Of the total drop of 327 feet between lake Erie and lake Ontario, an effective head of 305 feet is obtained by the Queenston-Chippawa development. This effective head is about twice that utilized by the plant located at the falls. This means that the efficiency of utilization of the water diverted from Niagara falls has been doubled, and for each cubic foot per second instead of 15 h.p., approximately 30 h.p. is now developed.

The Queenston-Chippawa development was begun in 1917 as a war measure, when the consumption of power in munition factories was greatest, at a time when the duration of the war could not be foreseen. High wage costs and high prices of material placed construction costs far above the original estimate of $10,500,000, besides which the ultimate capacity of the plant was enlarged. The cost of completing the first five units totalling 275,000 h.p., is now estimated at approximately $60,000,000.

The first of these units began operation on December 28, 1921; three others commenced operations in 1922 and the fifth in 1923. Three additional units, each with a capacity of 55,000 h.p., have been ordered, the first of which is expected to be in operation about the end of 1923.

Hydro-Electric Power Statistics.—The Canada Year Book of 1910 (p. xliii) described the installation on October 11, 1910, at Berlin, now Kitchener, Ontario, of electrical energy generated by the Niagara falls, and the initial work carried out by the Ontario Hydro-Electric Power Commission for the supply of electrically generated power to 15 municipalities. The growth of the Hydro system in Ontario is shown in the amount of power used by its customers. In 1910, the Commission supplied 750 h.p. to 10 municipalities; in 1915, 100,242 h.p. to 99 municipalites, in December, 1922, 294,061 h.p. was distributed, 81·7 p.c. of which was supplied to the Niagara district. "The government electric utilities in Ontario have grown from a league of seven municipalities formed in 1903 until now the vested interests of the people in this class of property are represented by investments totalling nearly $200,000,000, the bonded indebtedness of which is guaranteed by the Province of Ontario."

In Table **10** will be found a consolidated operating report of the Hydro-Electric Power Commission for the years 1912 (the earliest year for which the statistics are available) to 1922. The table shows that, during the 11 year period covered, the number of municipalities securing electricity from the Commission has increased from 28 to 214, the number of consumers from 34,967 to 303,090, the earnings from $1,617,674 to $12,756,104 and the operating expenses from $1,377,168 to $11,343,766.

10.—Consolidated Operating Report of the Hydro-Electric Power Commission of Ontario, 1912-1922.

Years.	Number of municipalities.	Number of Consumers.	Horse-power used.	Earnings.	Expenses.
				$	$
1912	28	34,967	-	1,617,674	1,377,168
1913	45	65,697	-	2,617,440	2,041,183
1914	69	96,744	70,698	3,433,656	2,678,328
1915	99	120,028	100,242	4,070,295	3,371,414
1916	128	148,732	120,768	4,983,601	4,140,066
1917	143	170,916	157,048	6,070,065	5,077,491
1918	166	183,987	159,990	7,082,039	5,736,335
1919	181	216,086	185,355	7,827,055	6,531,482
1920	184	245,666	208,232	9,707,901	8,094,056
1921	205	268,743	242,349	10,981,942	9,317,781
1922	214	303,090	294,061	12,756,104	11,343,766

In Table **11** will be found the financial statistics of the electrical installations of the municipalities served by the Hydro-Electric Commission for the four years 1919 to 1922. In this comparatively short period, earnings increased from $7,827,055 in 1919 to $12,756,104 in 1922, and operating expenses from $6,531,482 to $11,343,-766.

11.—Statement of Earnings and Operating Expenses of Electric Departments of Municipalities served by the Ontario Hydro-Electric Commission for the calendar years 1919-1922.

Items.	1919.	1920.	1921.	1922.
Number of municipalities	181	184	205	214
Earnings—	$	$	$	$
Domestic Light	1,991,632	2,546,345	3,149,080	3,786,608
Commercial Light	1,175,144	1,512,855	1,851,502	2,158,306
Power	3,443,107	3,752,188	3,895,437	4,383,912
Power, Municipal	–	532,279	645,531	973,263
Street Light	989,018	1,005,535	1,060,358	1,160,447
Rural	–	168,920	145,566	105,877
Miscellaneous	228,271	189,779	225,468	187,690
Total Earnings	**7,827,055**	**9,707,901**	**10,981,942**	**12,756,104**
Expenses—				
Power purchased	3,284,491	4,216,668	4,876,650	6,636,853
Sub-Station Operation	217,639	285,407	314,838	315,444
" " Maintenance	81,854	102,051	104,798	100,764
Dist. System, Operation and Maintenance	286,311	344,552	479,406	519,252
Line Transformers Maintenance	42,509	46,323	65,088	52,932
Meter	78,727	123,701	116,723	107,807
Consumers' Premises—Expenses	84,301	116,284	134,855	143,389
Street Light System, Operation and Maintenance	215,964	236,931	297,482	297,364
Promotion of Business	74,789	78,295	101,804	129,933
Billing and Collecting	236,595	295,943	321,686	338,153
General Office, Salaries and Expenses	452,131	559,695	656,268	605,852
Undistributed expenses	190,600	256,400	317,387	385,895
Interest and Debenture Payments	1,285,571	1,431,807	1,530,796	1,710,127
Total Expenses	**6,531,182**	**8,091,057**	**9,317,781**	**11,343,766**
Surplus	1,295,573	1,613,844	1,664,161	1,412,338
Depreciation Charge	814,219	902,029	1,044,435	715,814
Surplus less Depreciation Charge	481,354	711,815	619,726	696,524

Statistics of the assets and liabilities of the electric departments of the municipalities served by the Hydro-Electric Commission are given in Table **12.** These show total assets of $55,274,692 in 1922 as compared with liabilities of $35,196,388. Of the difference, $8,056,248 is assigned as reserves, leaving a surplus of $12,022,066. The ratio of net debt to total assets is 65·6 p.c.

The above assets are exclusive of the assets of the Hydro-Electric Commission, which on October 31, 1922, were estimated at $133,206,533, against which the balance due to the Provincial Treasurer was $118,024,532.

12.—Statement of Assets and Liabilities of Electric Departments of Municipalities served by the Ontario Hydro-Electric Commission for the calendar years 1919-1922.

Items.	1919.	1920.	1921.	1922.
Number of Municipalities	181	184	205	214
Assets—Plant—	$	$	$	$
Lands and Buildings	1,995,546	2,175,568	3,230,986	3,334,523
Sub-station Equipment	2,915,125	3,231,051	5,403,689	5,046,858
Distribution Systems, Overhead	7,445,820	8,579,882	8,397,361	11,165,330
" " Underground	1,206,297	1,313,369	1,401,136	1,598,053
Line Transformers	2,073,113	2,560,582	3,077,650	3,618,685
Meters	2,587,566	3,053,135	3,552,077	4,033,690
Street Light Equipment, Regular	1,206,639	1,269,007	1,335,997	1,419,016
" " Ornamental	546,498	557,678	610,587	666,084
Misc. Construction Expenses	2,530,101	2,697,636	3,030,134	3,261,496
Steam and Hydraulic Plant	986,201	757,195	704,848	565,159
Old Plant	805,960	864,298	912,389	7,997,947
Total Plant	24,298,866	27,059,401	31,656,854	42,706,841

12.—Statement of Assets and Liabilities of Electric Departments of Municipalities served by the Ontario Hydro-Electric Commission for the calendar years 1919-1922—concluded.

Items.	1919.	1920.	1921.	1922.
Number of Municipalities	181	184	205	214
Other Assets—	$	$	$	$
Bank and Cash Balance	462,437	943,858	900,842	1,164,336
Securities and Investments	627,076	341,856	477,679	443,938
Accounts Receivable	1,921,167	2,022,539	2,155,789	3,874,317
Inventories	1,032,570	1,400,672	1,504,596	1,738,796
Sinking Fund on Local Debentures	1,925,456	2,244,004	2,541,718	3,416,232
Equity in Hydro Systems	369,072	577,584	795,570	1,543,434
Other assets	86,216	25,447	78,930	238,940
Total Assets	30,722,860	34,615,361	40,111,979	55,126,834
Deficit	186,836	182,946	258,486	147,868
Total Plant and Other Assets	**30,909,696**	**34,798,307**	**40,370,465**	**55,274,692**
Liabilities—				
Debenture Balance	18,133,462	19,268,072	21,619,221	30,454,186
Accounts Payable	1,420,927	1,840,137	1,887,568	3,699,292
Bank Overdraft	403,236	514,672	989,100	456,707
Other Liabilities	670,272	642,294	938,369	586,203
Total Liabilities	**20,627,897**	**22,265,175**	**25,434,258**	**35,196,388**
Reserves—				
For Depreciation	3,750,162	4,788,645	5,491,859	6,512,814
For equity in H. E. P. C. System	373,872	577,584	800,249	1,543,434
Total Reserves	**4,124,034**	**5,366,229**	**6,292,108**	**8,056,248**
Surplus—				
Debentures paid	1,328,658	1,440,157	1,860,080	3,104,591
Local Sinking fund	1,754,020	2,246,474	2,541,718	3,416,231
Additional operating surplus	3,075,087	3,480,272	4,242,302	5,501,244
Total Surplus	**6,157,765**	**7,166,903**	**8,644,100**	**12,022,066**
Total Liabilities, Reserves and Surplus	**30,909,696**	**34,798,307**	**40,370,466**	**55,274,702**
Per cent net debt to total assets	67·9	65·3	64·7	65·6

Hydro-Electric Power Commissions in other Provinces.

Nova Scotia.—The Nova Scotia Power Commission operates two generating stations at St. Margaret's bay, N.S., one on the North East river, about two miles up from the mouth of the stream, operating under a head of 156 ft. and developing 3,900 h.p., and the other at tidewater near the mouth of the North East river, operating under a head of 90 ft. and developing a total of 6,900 h.p.

The hydro-electric station of the Lunenburg Gas Co. on the Mushamush river, a mile from Mahone, was also purchased and rebuilt. This plant operates under a head of 22 ft. and develops 700 h.p. The Commission is generating and, at present, selling all its power from the St. Margaret's bay plants to the Nova Scotia Tramways and Power Co., and is selling power from the Mahone plant to the Lunenburg Gas Co. for distribution in Lunenburg and Riverport.

New Brunswick.—The New Brunswick Electric Power Commission has constructed a power plant at the mouth of the Musquash river operating under a head of 95 ft. with turbines aggregating 11,100 h.p. The plant commenced operations in May 1923, and delivers power to the municipalities of St. John, Moncton, Fairville, Westfield, Fairvale, Hampton, Norton, Sussex, Apohaqui, Petitcodiac and Salisbury. The Commission is also buying power from the Bathurst Co. and selling it to the town of Newcastle.

Manitoba.—The Manitoba Power Commission entered into contract with the city of Winnipeg for a supply of power, and built 164 miles of transmission lines from Winnipeg, connecting Oakville, Portage la Prairie, Carman, Morden and Roland. The Commission purchased the hydro plant of the Minnedosa Power Co. and also built a fuel plant at Virden equipped with two oil engines aggregating 240 h.p. The Minnedosa plant is equipped with a 450 h.p. water turbine operating under a head of 19 ft. and two oil engines of 120 h.p. each. Minnedosa and Virden are not connected with the system of transmission lines, but are separately operated units.

VIII.—MANUFACTURES.

1.—Evolution of Canadian Manufactures.

Manufacture is defined as the operation of making wares from raw materials, by the hands, by tools or by machinery, thus adding, in the phraseology of the economist, new utilities and therefore additional value, to the already existing utilities and values of the raw material. Manufacture, in primitive societies and in the pioneer stages of new communities, is normally carried on within the household for the needs of the household, as was the case among the early settlers of Canada in the seventeenth and eighteenth centuries, when domestic manufactures were carried on in combination with the cultivation of the soil, mainly at the times of the year when agricultural operations were suspended. At a later period in the evolution of society, small manufactures are carried on in specialized workshops for the needs of the immediate locality or neighbourhood, as was generally the case in Eastern Canada in the first half of the nineteenth century. Later still, as a consequence of the introduction of machinery operated by steam or electric power—the so-called "Industrial Revolution"—and of the cheapening of transportation, manufacture has to an ever-increasing extent been concentrated in factories, often employing hundreds and even thousands of persons and producing for a national or even for an international market. So far as Canada is concerned, this "industrial revolution" may be said to have commenced shortly before Confederation and to be still in progress. The growth of manufacturing production since 1870 is outlined in this article and the accompanying Table **1**, while the increasing importance of manufacturing for the international market may be illustrated by the statistics of Table 7 of the Trade and Commerce section of the 1920 Year Book, which shows that Canadian exports of manufactured produce increased from less than $3,000,000 per annum on the average of 1871-1875 to $435,000,000 in the post-war fiscal year ended March 31, 1920.

The kind of manufactures to be established in a community will in the beginning be largely determined, more especially where transportation charges are high, by the type of raw materials available in that community. For example, probably the first agricultural process to be carried on by Europeans in what is now the Dominion of Canada, was the raising of a crop of grain at Port Royal, Nova Scotia, in 1605; the first manufacturing process was the grinding of the grain in the autumn of the year. Other earlier manufactures were also necessarily connected with the satisfaction of the primary needs of human beings for food, clothing and shelter, and with the other primary need for protection. At a census of occupations taken in 1681, we find a comparatively large number of tailors and shoemakers, masons and carpenters, gunsmiths and edge-tool makers, enumerated.

Nearly two centuries later, the first census of manufactures taken after Confederation for the year 1870 indicated that the majority of the industries were those

in which abundant raw material was at hand or those which supplied necessities for which transportation difficulties ensured a steady local market.

Until the later nineties the growth of Canadian manufacturing industry was not particularly rapid, though the great fall in the prices of commodities during the period from 1873 to 1897 was largely responsible for the comparatively slow growth of the values of manufactured commodities from $221.6 million in 1870 to $469.8 million in 1890. Afterwards there was a change; the prices of commodities commenced to rise, while the industries generally shared in the advantages of the great growing period from 1900 to 1912. The gross product of establishments with five hands or over increased from $368.7 million in 1890 to $1,166.0 million in 1910, and to $1,381.5 million in 1915. The fundamental advantages of the position of Canada, her abundant raw material, her inexhaustible water power, her growing home market in the expanding West, had contributed to produce this result.

The Influence of the War.—The influence of the war upon the manufactures of Canada was profound and far-reaching, tending to promote the diversification of product and the production at home of many commodities which had previously been imported. On account of the practical suspension of the importation of manufactured goods of many kinds from Europe, enterprising Canadian manufacturers were given opportunities of entering upon new lines of manufacture with practical control of the market. There was added to this the reflex effect of the great prosperity of agriculture, produced by the unprecedented prices of war-time. The farmers of Canada bought as never before. The general result was that industry worked at high pressure, not only to produce the munitions and military supplies for the armies of the Allies, but also to make the manifold varieties of goods required for the stimulated civilian consumption. The world shortage of staple commodities coupled with a strong domestic demand, gave to Canadian industries in general a pronounced stimulus toward greater production, and in a great number of cases the capacity of manufacturing plants was increased; this increase created a demand for greater supplies of raw material. Incidentally, factory methods became more specialized and a high degree of administrative and mechanical efficiency was attained, while Canada, partly owing to the temporary decline of Europe, assumed a new position as one of the leading industrial countries of the world.

The great boom in Canadian manufacture described above reached its height in the summer of 1920, the statistics for that year showing greatest gross and net value of products. The statistics for the year 1921, published at the end of Table 1, show a great decline in values, which does not mean a corresponding decline in actual physical quantity of production, though here a certain decline undoubtedly took place. On the whole 1922, the statistics for which are not yet available, was a rather better year for employment in manufactures than 1921, and 1923 has been a better year than 1922. It would, therefore, appear that the country is recovering from the great depression of 1921, and that the rather low statistics for that year are not more representative of normal conditions in Canadian manufacturing industries than are the extremely high figures of 1920. However, even in the autumn of 1923 it is the exception rather than the rule for manufacturers to be operating at capacity. Outstanding exceptions are the automobile and the pulp and paper industries, but their activity is chiefly due to the extent to which they are engaged in the export trade. Among the industries the output of which is largely governed by the condition of the home market, that which appears to be making the most encouraging recovery is the iron and steel industry.

In the present as in the past, Canadian manufacturing production has been chiefly dependent upon the use of Canadian raw material, though this is less true than formerly. Raw cotton, for example, is imported from the Southern States, hides from the Argentine, rubber from the Straits Settlements and Malay Peninsula, sugar from Cuba and the British West Indies, and wool from Australia and New Zealand, to supply the raw material for Canadian manufacturing industries.

2.—Statistics of Manufactures.

1.—Growth since 1871.

The growth of large-scale production in manufactures during the past fifty years is evident from the statistics of Table **1**, though this tendency has been less marked in Canada than in more highly developed industrial communities, with larger populations able to absorb a larger amount of standardized commodities. Even so, in the electoral district of South Toronto, the most important manufacturing centre of Ontario, the census of 1911 showed that one-half of the industrial establishments employed 90 p.c. of the workers. In the period immediately preceding the Great War many consolidations of previously independent manufacturing plants were effected, involving large economies in the purchase of materials and in selling expenses.

The historical Table **1** shows fairly well the advance of the "Industrial Revolution" (which might better be called Evolution) in Canada. The average capital per manufacturing establishment, the average number of employees per establishment, and the average value of product per establishment, have been in trend continuously on the increase. If the consolidation of industry lessens the chances of an employee becoming a master, it must also be remembered that the amounts paid to employees in salaries and wages have also increased, so that the position of the average employee has been greatly ameliorated, though the lack of statistics on Canadian prices before 1890 prevents us from comparing the purchasing power of the average wages of the worker in 1870 and of the employee of 1920 and 1921.

The Censuses of Manufactures.—The comparability of the statistics of the various censuses is seriously affected by the different methods employed in taking the census. In the censuses of 1870, 1880 and 1890, all manufacturing establishments were included, the instructions to enumerators running as follows:—"An industrial establishment is a place where one or several persons are employed in manufacturing, altering, making up or changing from one shape into another, materials for sale, use or consumption, quite irrespectively of the amount of capital employed or of the products turned out. All repairs, mending or custom work are understood to be industrial products and are to be entered accordingly, by value, in the returns of industrial establishments."

In the statistics for 1900, 1905, and 1910, however, only establishments employing five hands and upwards were included. The 1901 instructions are that no manufacturing establishment or factory will be so recognized for census purposes which does not employ at least five persons, either in the establishment itself or as pieceworkers employed out of it. This, however, did not apply to cheese and butter factories nor to certain mineral products. The 1911 instructions stated that every factory in operation during the whole or part of 1910, and employing five or more persons, was to make a full report. All flour mills, saw and shingle mills, lime kilns brick and tile works, butter and cheese factories, fish curing plants, electric light and power plants whatsoever were nevertheless to be included. The statistics for 1915 included only establishments having an output of $2,500 or over, irrespective of the

number of persons employed, except in the case of flour and grist mills, butter and cheese factories, fish preserving factories, saw-mills, brick and tile yards, lime kilns and electric light plants, where all plants were included.

Under the Statistics Act of 1918, the policy of including mines, fisheries, manufactures and other industrial production in the decennial census was abandoned and an annual "census of industry" substituted therefor. (See first annual report of the Dominion Statistician, pp. 30-36).

In the census of industry for 1917, the limit of output was withdrawn and all establishments reporting to the Bureau were included, the effect being an increase in the number of establishments included from 21,306 in 1915 to 34,392 in 1917—an increase due mainly to change of method, rather than to a change in the actual number of industrial establishments existing in the Dominion. Similar methods have been pursued in succeeding censuses, so that the results for the five years from 1917 to 1921 are strictly comparable, a fact which has been the guiding principle in framing the table included in this part of the Year Book. As the establishments included for the first time in the 1917 census were those which carried on business only on a small scale, their inclusion affected only to a minor extent the statistics of those engaged in production and of the value of products.

Censuses of Manufactures in Recent Years.—The census of manufactures has since 1917 been taken by the Dominion Bureau of Statistics annually instead of quinquennially as theretofore. The last of the quinquennial censuses was taken in 1916 for the calendar year 1915, and the first annual censuses were taken in the years from 1918 to 1922 for the years 1917 to 1921.

In any comparison between the results of the 1915 quinquennial census and the subsequent annual censuses the rapid rise in prices must be borne in mind, and in comparisons between these annual censuses themselves the same factor must be taken into account. Thus, the new Canadian index number of wholesale prices compiled by the Dominion Bureau of Statistics was 248.2 in 1920 as compared with 213.2 in 1919, 207.8 in 1918, 174.6 in 1917, and 115.6 in 1915. In 1921, however, there was a great decline to 177.3 on the average of the year—a decline of approximately 28.6 p.c. from the preceding year. Under such circumstances it was inevitable that up to 1920 phenomenal advances in the money value of manufactured products should have been recorded, and that wages and salaries paid should also have greatly advanced since 1915. It was equally inevitable that in all these respects 1921 should show a great decline, due in much larger measure to the fall in values than to the decrease in physical production.

Historical Statistics.—In Table 1 are presented statistics showing by provinces the development of Canadian manufacturing industries during the half-century from 1870 to 1921. Particularly notable is the increase in the manufactures of British Columbia from $2.9 million in 1880 to $163.2 million in 1921, and of Manitoba from $3.4 million in 1880 to $123.5 million in 1921. Saskatchewan also shows an increase from $2.4 million in 1905 to $50.3 million in 1921, and Alberta from $5.0 million in 1905 to $66.7 million in 1921. Thus the West is rapidly becoming an important contributor to Canadian manufacturing production.

1.—Historical Summary of Statistics of Manufactures, by Provinces, 1870 to 1921.

(All establishments irrespective of the number of employees.)

Provinces.	Establishments.	Capital.	Employees.	Salaries and wages.	Cost of materials.	Net value of products.	Gross value of products.
1870.	No.	$	No.	$	$	$	$
Canada	**41,259**	**77,964,020**	**187,942**	**40,851,009**	**124,907,846**	**96,709,927**	**221,617,773**
Nova Scotia	4,912	6,041,966	15,595	3,176,266	5,806,257	6,531,848	12,338,105
New Brunswick	3,479	5,976,176	18,352	3,869,360	9,431,760	7,935,927	17,367,687
Quebec	13,818	28,071,868	66,714	12,389,673	44,555,025	32,650,157	77,205,182
Ontario	19,050	37,874,010	87,281	21,415,710	65,114,804	49,591,995	114,706,799
1880.							
Canada	**49,722**	**165,302,623**	**254,935**	**59,429,002**	**179,918,593**	**129,757,475**	**309,676,068**
P.E. Island	1,617	2,085,776	5,767	807,208	1,829,210	1,570,998	3,400,208
Nova Scotia	5,493	10,183,060	20,390	4,098,445	10,022,030	8,553,296	18,575,326
New Brunswick	3,005	8,425,282	19,922	3,866,011	11,060,842	7,451,816	18,512,658
Quebec	15,754	59,216,992	85,673	18,333,162	62,563,967	42,098,291	104,662,258
Ontario	23,070	80,950,847	118,308	30,604,031	91,164,156	66,825,714	157,989,870
Manitoba	344	1,383,331	1,921	755,507	1,924,821	1,488,205	3,413,026
British Columbia	415	2,952,835	2,871	929,213	1,273,816	1,652,968	2,926,784
The Territories	24	104,500	83	35,425	79,751	116,187	195,938
1890.							
Canada	**75,964**	**353,213,000**	**369,595**	**100,415,350**	**259,759,292**	**219,088,594**	**469,847,886**
P.E. Island	2,679	2,911,963	7,910	1,101,620	2,092,067	2,253,843	4,345,910
Nova Scotia	10,495	19,730,736	34,944	7,233,111	16,062,479	14,905,913	30,968,392
New Brunswick	5,429	15,821,855	26,675	5,970,914	12,501,453	11,348,202	23,849,655
Quebec	23,034	116,974,615	116,753	30,461,315	80,712,496	66,747,087	147,459,583
Ontario	32,151	175,972,021	166,322	49,730,359	127,737,371	111,504,555	239,241,926
Manitoba	1,031	5,684,237	4,403	1,905,981	5,688,151	4,467,031	10,155,182
British Columbia	770	14,404,394	11,507	3,586,897	5,119,258	6,880,670	11,999,928
The Territories	375	1,713,179	1,081	425,153	846,017	981,293	1,827,310
1890.		*(Establishments with five hands and over.)*					
Canada[1]	**14,065**	–	**272,033**	**79,234,311**	–	–	**368,696,723**
1900.							
Canada	**14,650**	**446,916,487**	**339,173**	**113,249,359**	**266,527,858**	**214,525,517**	**481,053,375**
P.E. Island	334	2,081,766	3,804	445,998	1,319,058	1,007,650	2,326,708
Nova Scotia	1,188	34,586,416	23,284	5,613,571	13,161,077	10,431,436	23,592,513
New Brunswick	919	20,741,170	22,158	5,748,990	10,814,014	10,158,456	20,972,470
Quebec	4,845	142,403,407	110,329	36,550,655	86,679,779	71,608,215	158,287,994
Ontario	6,543	214,972,275	161,757	56,548,286	138,230,400	103,303,086	241,533,486
Manitoba	324	7,539,691	5,219	2,419,549	7,955,504	4,971,935	12,927,439
Alberta and Saskatchewan	105	1,689,870	1,168	465,763	1,121,342	843,645	1,964,987
British Columbia	392	22,901,892	11,454	5,456,538	7,246,684	12,201,094	19,447,778
1905.							
Canada	**12,547**	**833,916,155**	**383,920**	**162,155,578**	–	–	**706,446,578**
P.E. Island	223	1,553,916	2,770	409,915	–	–	1,696,459
Nova Scotia	720	74,599,538	23,754	9,139,371	–	–	31,987,449
New Brunswick	531	26,461,664	19,170	6,497,161	–	–	21,833,564
Quebec	4,115	251,730,182	116,748	46,514,619	–	–	216,478,496
Ontario	6,163	390,875,465	184,526	80,729,889	–	–	361,372,741
Manitoba	280	27,070,665	10,113	5,800,707	–	–	27,857,396
Saskatchewan	55	3,820,975	1,376	681,381	–	–	2,443,801
Alberta	97	5,400,371	1,983	1,129,272	–	–	4,979,932
British Columbia	363	52,403,379	23,480	11,253,263	–	–	37,796,740
1910.							
Canada	**19,218**	**1,247,583,609**	**515,203**	**241,008,416**	**601,509,018**	**564,466,621**	**1,165,975,639**
P.E. Island	442	2,013,365	3,762	531,017	1,816,804	1,319,666	3,136,470
Nova Scotia	1,480	79,596,341	28,795	10,628,955	26,058,315	26,647,869	52,706,184
New Brunswick	1,158	36,125,012	24,755	8,314,212	18,516,096	16,906,206	35,422,302
Quebec	6,584	326,946,925	158,207	69,432,967	184,374,053	166,527,603	350,901,656
Ontario	8,001	595,394,608	238,817	117,645,784	297,580,125	282,230,100	579,810,225
Manitoba	439	47,941,540	17,325	10,912,866	30,499,829	23,173,780	53,673,609
Saskatchewan	173	7,019,951	3,250	1,936,284	2,747,266	3,584,866	6,332,132
Alberta	290	29,518,346	6,980	4,365,661	9,998,777	8,790,048	18,788,825
British Columbia	651	123,027,521	33,312	17,240,670	29,917,753	35,286,483	65,204,236
1915.							
Canada	**15,593**	**1,958,705,230**	–	**283,311,505**	**791,943,433**	**589,603,792**	**1,381,547,225**
P.E. Island	261	1,841,690	–	543,954	1,499,066	1,087,757	2,586,823
Nova Scotia	781	125,754,562	–	17,175,818	36,194,004	33,151,815	69,345,819
New Brunswick	630	45,970,488	–	8,767,230	21,314,643	15,989,257	37,303,900
Quebec	5,743	530,312,464	–	80,324,171	213,754,115	167,449,884	381,203,999
Ontario	6,538	946,619,114	–	140,609,691	410,670,537	304,861,302	715,531,839
Manitoba	499	94,690,750	–	13,389,569	38,529,386	21,952,060	60,481,446
Saskatchewan	238	14,736,860	–	2,440,062	7,417,166	5,938,040	13,355,206
Alberta	282	41,198,897	–	4,791,281	20,699,967	8,716,254	29,416,221
British Columbia	621	157,580,405	–	15,269,729	41,864,549	30,457,423	72,321,972

[1]These statistics are not available by Provinces.

NOTE.—For 1915 the number of employees in establishments employing 5 hands and over has not been compiled.

1.—Historical Summary of Statistics of Manufactures, by Provinces, 1870 to 1921 —concluded.

(All establishments irrespective of the number of employees.)

Provinces.	Establishments.	Capital.	Employees.	Salaries and wages.	Cost of materials.	Net value of products.	Gross value of products.
	No.	$	No.	$	$	$	$
1916.							
Canada	**21,306**	**1,994,103,272**	**497,170**	**285,889,291**	**802,135,862**	**605,001,278**	**1,407,137,140**
P.E. Island	291	1,906,564	2,334	554,467	1,520,327	1,126,142	2,646,469
Nova Scotia	968	126,539,183	33,581	16,316,712	37,738,161	33,122,595	70,860,756
New Brunswick	714	46,290,014	17,423	8,765,433	21,495,324	16,336,710	37,832,034
Quebec	7,158	548,972,575	148,329	80,217,258	216,497,844	171,402,741	387,900,585
Ontario	9,287	956,883,423	243,905	144,072,317	415,285,954	312,637,320	727,923,274
Manitoba	840	95,845,845	19,668	13,614,857	38,513,514	23,080,670	61,594,184
Saskatchewan	457	16,788,992	3,621	2,705,754	7,678,416	6,484,158	14,162,574
Alberta	584	42,239,693	7,255	5,074,742	21,121,439	9,471,394	30,592,833
British Columbia	1,007	158,636,983	21,054	14,567,751	42,284,883	31,339,548	73,624,431
1917.							
Canada	**34,392**	**2,786,649,727**	**674,910**	**550,192,069**	**1,605,730,640**	**1,409,847,300**	**3,015,577,940**
P.E. Island	534	2,652,374	1,923	837,230	3,402,485	2,115,425	5,517,910
Nova Scotia	2,147	136,521,655	31,398	23,553,090	109,736,731	66,632,294	176,369,025
New Brunswick	1,423	65,539,370	21,363	13,822,446	33,333,090	29,084,376	62,417,466
Quebec	10,042	823,317,251	211,018	158,134,925	403,422,445	427,191,584	830,614,029
Ontario	14,381	1,335,968,699	326,635	278,462,708	822,842,054	710,896,601	1,533,738,655
Manitoba	1,329	101,145,033	22,670	19,599,051	73,131,719	49,673,162	122,804,881
Saskatchewan	1,436	33,114,630	8,210	7,007,073	23,449,495	17,208,251	40,657,746
Alberta	1,317	63,215,444	11,524	10,387,379	43,896,941	27,772,482	71,669,423
British Columbia	1,772	221,436,100	40,098	38,269,366	92,489,277	78,936,339	171,425,616
Yukon	11	3,739,171	71	118,801	26,403	336,786	363,189
1918.							
Canada	**35,797**	**3,034,301,915**	**678,337**	**629,799,644**	**1,900,252,314**	**1,557,784,661**	**3,458,036,975**
P.E. Island	484	2,886,662	1,467	777,067	3,547,800	2,146,078	5,693,878
Nova Scotia	2,125	133,262,649	29,569	25,563,978	93,540,657	66,869,233	160,409,890
New Brunswick	1,364	74,470,879	19,888	14,247,388	34,513,640	33,819,429	68,333,069
Quebec	10,540	860,468,768	207,494	175,800,005	472,444,599	448,176,572	920,621,171
Ontario	15,365	1,508,011,435	333,972	320,740,214	1,008,824,704	800,242,297	1,809,067,001
Manitoba	1,444	105,983,159	23,887	23,389,683	92,600,183	52,431,327	145,031,510
Saskatchewan	1,422	39,476,260	8,066	8,496,172	30,614,183	19,395,452	50,009,635
Alberta	1,252	61,405,933	9,894	10,249,465	54,740,907	27,693,515	82,434,422
British Columbia	1,786	244,697,241	44,039	50,422,163	109,403,517	106,772,000	216,175,517
Yukon	15	3,638,929	61	104,509	22,124	238,758	260,882
1919.							
Canada	**38,344**	**3,239,686,368**	**682,434**	**689,435,709**	**1,875,615,877**	**1,645,115,712**	**3,520,731,589**
P.E. Island	539	2,867,035	1,605	973,306	4,269,843	2,599,741	6,869,584
Nova Scotia	2,249	131,914,231	28,105	24,557,105	74,928,099	65,196,996	140,125,095
New Brunswick	1,439	89,958,882	24,248	19,244,350	53,471,290	46,534,315	100,005,605
Quebec	11,061	936,712,125	205,561	189,732,521	517,596,980	470,987,843	988,574,823
Ontario	16,438	1,583,161,271	323,372	336,579,559	943,622,018	793,921,978	1,737,543,996
Manitoba	1,622	111,535,665	27,354	30,695,829	90,539,234	62,480,875	153,020,109
Saskatchewan	1,534	35,869,588	9,479	11,437,427	35,437,613	24,314,873	59,752,486
Alberta	1,379	66,673,667	12,997	15,186,068	55,796,219	39,059,540	94,855,759
British Columbia	2,064	268,419,281	49,671	60,964,272	99,944,539	139,850,449	239,794,988
Yukon	19	3,574,623	42	65,272	20,042	169,102	189,144
1920.							
Canada	**43,200**	**3,443,276,053**	**685,349**	**816,055,139**	**2,190,891,214**	**1,833,848,249**	**4,024,739,463**
P.E. Island	538	3,190,812	1,643	1,133,241	4,412,512	2,615,179	7,027,691
Nova Scotia	2,477	148,270,147	28,399	31,083,770	90,245,269	72,963,570	163,208,839
New Brunswick	1,588	109,465,537	21,130	21,294,425	62,702,705	51,052,424	113,755,129
Quebec	11,645	1,031,322,966	205,431	224,237,747	575,990,383	545,237,606	1,121,227,989
Ontario	17,886	1,705,496,450	333,992	408,203,562	1,122,940,608	890,245,847	2,013,186,455
Manitoba	1,908	118,620,805	28,764	39,069,278	99,756,492	76,024,415	175,780,907
Saskatchewan	2,350	40,224,939	10,476	14,420,242	40,071,236	32,633,767	72,705,003
Alberta	2,043	60,619,340	14,424	18,991,514	60,654,356	37,954,200	98,608,556
British Columbia	2,750	224,597,477	41,030	57,516,415	134,044,855	124,913,470	258,958,325
Yukon	15	1,467,580	60	104,945	72,798	207,771	280,569
1921.							
Canada	**41,323**	**3,210,709,288**	**517,141**	**581,402,385**	**1,446,304,122**	**1,301,622,553**	**2,747,926,675**
P.E. Island	446	2,452,826	1,098	651,620	2,658,448	1,575,684	4,234,132
Nova Scotia	2,196	107,490,242	17,206	16,663,920	43,919,126	40,296,696	84,215,822
New Brunswick	1,326	103,367,891	13,741	11,815,664	33,335,429	26,179,312	59,514,741
Quebec	10,762	973,722,564	159,698	164,450,443	406,553,322	378,200,483	784,753,805
Ontario	18,093	1,620,681,181	258,345	303,938,086	744,433,905	666,842,526	1,411,276,431
Manitoba	1,965	100,441,542	20,732	26,992,333	68,216,070	55,254,323	123,470,393
Saskatchewan	2,027	34,794,506	7,235	8,842,286	29,538,969	20,723,666	50,262,635
Alberta	2,024	55,538,526	10,324	12,160,529	36,978,788	29,724,150	66,702,938
British Columbia	2,470	210,798,811	28,700	35,775,528	80,607,323	82,604,700	163,212,023
Yukon	14	1,421,199	62	111,976	62,742	221,013	283,755

2.—Recent Manufacturing Production.

[For the scheme of reports annually issued on the manufacturing industries by the Dominion Bureau of Statistics, the reader is referred to the section later on in this volume, dealing with the organization of the Bureau and its publications.]

Since and including 1917, the census of manufactures has been taken on a comparable basis. According to the census of 1921 there were in Canada 41,323 manufacturing establishments, distributed throughout the nine provinces and Yukon Territory. The total number of employees was 517,141, the amount of capital invested $3,210,709,288 and the output was valued at $2,747,926,675. As compared with 1917 there was a decrease of 23.4 p.c. in the number of employees, an increase of over 15 p.c. in the amount of capital invested and a decrease of over 8.8 p.c. in the value of products.

Value of Products.—The gross value of manufactured products for 1921 was reported as $2,747,926,675; the cost of materials was $1,446,304,122, leaving $1,301,622,553 as the value added by manufacture. As the finished products of one branch of manufacture are constantly used as materials in other branches, in the ascending scale of modern industry, it follows that they are counted over and over again, swelling in this manner the total gross value of products. The total value of manufactured products, strictly defined, would include (1) the value of all raw materials obtained from the extractive and primary production industries which have entered into the manufactured output, and (2) the entire value added to these raw materials by manufacturing processes from the time they first entered any factory up to the close of the census year. This value would be very much greater than the $1,302 million added by manufacture.

Volume of Production.—The unsatisfactory nature of the monetary unit as a standard of measurement suggests the desirability of an expedient to place the production data of recent years on a more uniform basis. The value of the dollar has fluctuated greatly during the last ten years, the inflation culminating in May, 1920. In Table 2 are presented basic data used in determining the relative volume of products manufactured in Canada during the several years specified. The index numbers representing the volume of products as shown in the last column of the table will serve as a better measure than mere values of the annual output of manufacturing establishments in Canada. The index number of value of products in 1921 was 195 and the index number representing wholesale prices was 153. If the former number is divided by the latter the resultant quotient is 127, or, otherwise expressed, the volume of products in 1921 exceeded that of 1915 by 27 p.c.

2.—Volume of Products of Canadian Manufactures, 1915-1921.

Years.	Gross Value of Products.	Index Numbers.		
		Gross Value of Products.	Wholesale Prices of Commodities.	Volume of Manufactured Products.
	$			
1915	1,407,137,140	100	100	100
1917	3,015,577,940	214	151	142
1918	3,458,036,975	246	180	137
1919	3,520,731,589	250	212	118
1920	4,024,739,463	286	215	133
1921	2,747,926,675	195	153	127

Statistics for recent years.—In Table 3 are given summary statistics of the manufactures of Canada for the three years 1919 to 1921 inclusive. Similar statistics for 1917 and 1918 were given in Table 110 on page 363 of the 1921 edition.

3.—Summary Statistics of Manufactures of Canada, 1919, 1920 and 1921.

(All establishments irrespective of the number of employees.)

Items.	1919.	1920.	Increase p.c. 1919-20.	1921.	Decrease p. c. 1920-21.
Establishments.....No.	38,344	43,200	12·66	41,323	4·34
Capital..... $	3,230,686,368	3,443,276,053	6·58	3,210,709,288	6·75
Average capital per establishment..... $	84,255	79,705	−5·40	77,698	2·52
Employees on salaries.....No.	88,316	89,297	1·82	76,777	14·62
Salaries..... $	130,855,002	158,353,778	21·01	140,110,891	11·52
Average salary..... $	1,482	1,761	18·82	1,825	+ 3·63
Employees on wages.....No.	594,118	596,052	0·33	440,364	27·79
Wages..... $	558,580,707	657,701,361	17·75	441,291,494	32·90
Average wage..... $	940	1,102	17·23	1,002	9·07
Cost of materials..... $	1,875,615,877	2,190,891,214	16·81	1,446,304,122	33·98
Value added in manufacture.... $	1,645,115,712	1,833,848,249	11·47	1,301,622,553	29·02
Value of products..... $	3,520,731,589	4,024,739,463	14·32	2,747,926,675	31·47
Average value products per establishment..... $	91,820	93,165	1·49	66,499	28·62
Piece Workers[1].....No.	15,374	14,893	− 3·13	-	-
Earnings of piece workers..... $	3,401,663	3,943,810	15·94	-	-

NOTE.—Minus (−) denotes decrease. [1]Not included in general statistics of number of employees or earnings.

A classification based on the component material of the chief product of value of each establishment was applied for the first time in the compilation of the returns for 1920. The number of groups was reduced from fifteen to nine to correspond with the external trade classification, and the classes of industry were somewhat altered to conform with recent industrial organization. In Table 6 are given statistics of production and employment for the years 1918 to 1920 under the old classification, while at the commencement of Table 7 similar statistics are given for 1920 and 1921, under the new classification of industries. The statistics of the forty largest manufacturing industries according to gross value of production, in 1920 and 1921 are presented in tables 4 and 5.

4.—Principal Statistics of Forty Leading Industries, 1920.

Industries.	Establishments.	Capital Invested.	Cost of Materials.	Value of Products.
	No.	$	$	$
Slaughtering and meat-packing	86	84,288,306	170,916,888	240,544,618
Flour and grist mill products	1,332	68,838,927	205,746,546	239,255,461
Pulp and paper	100	347,553,333	84,208,688	236,420,176
Lumber, lath and shingle mills	3,481	199,651,576	103,077,980	207,163,577
Foundry and machine shop products	792	149,323,908	53,976,167	140,478,057
Sugar refineries	8	46,499,876	113,967,945	131,772,715
Building and construction	1,548	47,694,574	40,424,944	126,991,068
Butter and cheese	3,133	25,286,106	106,211,588	125,816,656
Rolling mills and steel furnaces	41	90,632,751	46,371,695	101,616,104
Automobiles	17	53,906,506	67,157,045	101,465,846
Cottons	31	76,413,703	53,402,723	92,490,002
Rubber goods (including rubber footwear)	35	58,370,039	41,838,200	80,717,308
Car repair shops	157	-	26,682,339	70,568,913
Boots and shoes (leather)	173	34,347,026	40,807,366	66,817,174
Electric light and power	819	448,273,642	-	65,705,060
Clothing, men's, factory	196	37,920,004	34,589,605	62,066,487
Bread and other bakery products	1,769	23,612,654	38,239,135	61,800,633
Petroleum	9	50,098,209	37,847,086	57,675,676
Hosiery and knit goods	128	42,113,393	34,238,894	56,736,545
Tobacco, cigars and cigarettes	98	33,966,154	17,826,151	55,125,617
Electrical apparatus	96	68,318,262	26,812,829	55,120,964
Shipbuilding and repairs	82	62,882,630	20,952,217	54,825,696
Biscuits and confectionery	400	31,217,581	30,939,803	54,658,833
Printing and publishing	1,007	40,446,671	15,597,082	53,841,603

4.—Principal Statistics of Forty Leading Industries, 1920—concluded.

Industries.	Establishments.	Capital Invested.	Cost of Materials.	Value of Products.
	No.	$	$	$
Lumber products	810	44,138,873	29,624,883	53,365,656
Cars and car works	11	61,883,898	28,736,470	53,313,260
Clothing, women's, factory	274	22,750,922	30,956,445	52,874,568
Agricultural implements	80	101,107,516	20,474,379	44,073,847
Leather, tanned, curried and finished	100	29,739,987	30,370,591	41,440,602
Printing and bookbinding	670	28,248,490	14,015,292	38,826,979
Plumbing, heating and tinsmithing	2,159	20,828,185	20,029,384	38,508,784
Furniture and upholstered goods	320	31,181,219	13,206,583	33,606,637
Fish, preserved	940	20,512,265	19,363,029	30,900,147
Woolen goods	66	22,783,128	14,720,413	28,018,565
Pig iron and ferro-alloys	9	29,128,967	20,290,760	26,946,433
Paints and varnishes	48	20,320,851	15,918,557	26,939,476
Hats and caps	230	16,594,962	12,915,687	22,688,674
Boilers and engines	55	32,662,552	9,891,832	22,614,951
Clothing, men's, custom	1,620	11,516,424	9,966,713	20,826,426
Furnishing goods, men's	62	14,405,583	12,920,395	20,555,619
Totals for Forty Leading Industries	**22,992**	**2,629,560,970**	**1,715,234,329**	**3,095,125,413**
Totals for All Industries	**43,200**	**3,443,276,053**	**2,190,891,214**	**4,024,739,463**
Percentage of Forty Industries to Total of All Industries	**53·22**	**76·37**	**78·29**	**76·90**

5.—Principal Statistics of Forty Leading Industries, 1921.

Industries.	Establishments.	Capital Invested.	Cost of Materials.	Value of Products.
	No.	$	$	$
Flour and grist mill products	582	59,234,847	153,445,024	179,632,246
Slaughtering and meat-packing	84	58,459,555	113,389,835	153,136,289
Pulp and paper	100	379,812,751	62,276,224	151,003,165
Saw, lath and shingle mills	3,126	186,019,994	57,242,686	116,891,191
Butter and cheese	3,087	27,535,634	77,797,821	97,653,426
Housebuilding and construction	1,501	50,896,653	31,155,060	85,224,331
Electric light and power	857	484,669,451	–	73,636,094
Sugar, refined	7	35,783,067	56,882,242	69,509,827
Automobiles and motor trucks	14	40,080,269	45,119,345	67,050,209
Cotton yarn and cloth	31	65,947,429	35,157,233	65,978,596
Rolling mills and steel furnaces	39	121,859,860	34,820,791	56,201,810
Printing and publishing	836	38,788,973	15,412,712	53,613,061
Tobacco, cigars and cigarettes	94	35,757,047	15,374,386	52,050,244
Petroleum, refined	11	55,630,864	35,850,653	51,565,403
Bread and other bakery products	1,658	23,551,215	29,202,936	51,367,917
Biscuit and confectionery	372	30,655,589	22,600,821	46,758,014
Boots and shoes, leather	177	31,644,855	23,379,183	44,665,381
Electrical apparatus and supplies	96	62,725,361	19,215,135	44,497,268
Clothing, men's, factory	162	30,244,384	29,929,415	43,766,569
Foundries and machine shop products	325	62,152,439	17,221,919	42,205,275
Steam railway cars	11	52,873,569	22,910,095	40,245,831
Agricultural implements	75	94,129,064	17,946,282	36,763,160
Hosiery and knit goods	127	37,906,361	18,960,491	36,689,534
Clothing, women's, factory	176	13,694,846	18,617,634	35,256,026
Woodworking, sash and door factories	758	41,239,799	18,434,190	35,186,135
Printing and bookbinding	625	28,275,937	10,853,841	33,414,432
Breweries	55	37,645,447	9,714,486	30,931,853
Plumbing and tinsmithing	2,137	12,219,038	13,777,756	28,260,326
Sheet metal products	129	27,681,041	13,219,712	26,774,936
Rubber goods	23	38,420,786	12,219,987	25,618,042
Furniture and upholstering	345	28,878,955	8,528,820	23,975,369
Leather tanneries	119	32,137,488	15,157,358	22,905,528
Industrial machinery	112	40,000,370	6,011,038	21,608,218
Shipbuilding and repairs	38	38,005,783	5,986,029	19,509,059
Fish curing and packing	842	19,411,990	11,708,478	18,894,132
Gas, lighting and heating	50	37,097,280	9,279,697	18,772,285
Automobile repairs	2,716	7,773,825	7,515,942	18,505,912
Paints and varnishes	49	20,330,951	9,714,521	18,044,325
Furnishing goods, men's	82	11,800,238	10,229,398	17,946,293
Heating and ventilating appliances	54	24,159,408	4,777,045	16,119,383
Totals for Forty Leading Industries	**21,682**	**2,525,132,413**	**1,121,036,221**	**2,071,827,095**
Totals for All Industries	**41,323**	**3,210,709,288**	**1,446,304,122**	**2,747,926,675**
Percentage of Forty Industries to Total of All Industries	**52·49**	**78·65**	**77·51**	**75·43**

6.—Summary Statistics of Manufactures, by Groups

Groups of Industries.	Establishments.			Capital.		
	1918.	1919.	1920.	1918.	1919.	1920.
	No.	No.	No.	$	$	$
1. Food products	7,968	8,031	8,210	340,499,122	359,366,536	368,199,680
2. Textiles	4,191	4,366	4,668	237,724,097	265,819,050	322,969,862
3. Iron and steel products	1,064	1,135	1,175	339,483,020	349,929,834	383,849,892
4. Timber and lumber and re-manufactures	4,594	4,966	5,159	334,104,182	395,808,490	411,355,727
5. Leather and its finished products	1,672	2,057	2,941	76,652,767	88,272,360	86,190,939
6. Paper and printing	1,762	1,803	2,004	242,046,328	288,974,274	349,735,550
7. Liquors and beverages	391	405	412	47,973,751	45,236,675	61,272,930
8. Chemicals and allied products	337	312	435	134,377,823	138,133,759	179,054,280
9. Clay, glass and stone products	793	558	339	73,528,361	86,081,326	21,268,208
10. Metals and metal products other than iron and steel	2,392	2,942	3,705	132,757,003	145,351,322	94,623,279
11. Tobacco and its manufactures	153	144	125	32,948,356	37,639,965	47,322,591
12. Vehicles for land and air trsanportation	893	897	973	179,799,539	122,883,658	149,749,703
13. Vehicles for water transportation	204	177	189	57,444,939	72,114,691	64,250,556
14. Miscellaneous industries	2,595	2,610	2,731	742,635,175	753,834,956	810,935,820
15. Hand trades	6,788	7,941	10,134	62,327,452	81,239,472	92,497,036
Totals	**35,797**	**38,344**	**43,200**	**3,031,301,915**	**3,230,686,368**	**3,443,276,053**

Groups of Industries.	Employees on Salaries.			Salaries paid.		
	1918.	1919.	1920.	1918.	1919.	1920.
	No.	No.	No.	$	$	$
1. Food products	12,036	13,864	14,279	14,420,250	17,681,234	20,968,728
2. Textiles	7,569	10,537	9,685	11,711,389	14,946,343	19,464,122
3. Iron and steel products	7,082	8,051	8,500	11,566,806	13,518,253	16,363,180
4. Timber and lumber and re-manufactures	6,593	8,608	6,694	9,835,274	12,734,049	12,565,720
5. Leather and its finished products	2,31	2,855	2,852	3,372,088	4,751,016	5,487,282
6. Paper and printing	7,797	9,547	11,699	11,041,001	14,844,110	20,898,948
7. Liquors and beverages	949	927	1,209	1,619,113	1,484,443	2,094,232
8. Chemical and allied products	2,850	2,815	3,976	4,524,669	4,803,087	7,734,100
9. Clay, glass and stone products	978	1,018	534	1,493,600	1,792,118	1,028,050
10. Metals and metal products other than steel	3,682	4,672	3,931	5,578,802	6,551,620	6,354,247
11. Tobacco and its manufactures	1,039	1,325	1,438	1,563,801	2,367,599	2,777,766
12. Vehicles for land and air transportation	3,573	4,088	4,540	5,247,893	6,679,565	9,815,366
13. Vehicles for water transportation	1,403	1,432	1,298	1,923,055	2,616,933	2,540,721
14. Miscellaneous industries	14,836	15,268	15,032	20,304,583	21,175,982	23,706,941
15. Hand trades	2,515	3,309	3,720	3,300,750	4,908,650	6,554,375
Totals	**75,221**	**88,316**	**89,297**	**107,503,074**	**130,855,002**	**158,353,778**

of Industries (Old Classification), 1918, 1919 and 1920.

Cost of Materials.			Value of Products.		
1918.	1919.	1920.	1918.	1919.	1920.
$	$	$	$	$	$
636,392,864	736,404,245	746,902,089	839,086,118	949,234,158	977,149,828
196,080,057	227,841,353	273,678,278	342,385,878	400,902,541	468,340,134
238,483,815	120,772,003	174,367,807	443,455,779	299,480,387	388,659,450
94,000,304	132,917,264	86,880,211	251,699,154	354,617,529	402,757,053
58,755,096	85,187,804	86,784,379	94,577,196	129,980,237	136,578,344
62,276,642	73,664,746	117,396,463	167,367,972	203,502,828	311,756,454
13,476,912	15,263,730	23,071,665	28,266,256	33,820,948	50,347,697
93,754,000	66,421,263	110,690,115	173,649,073	122,889,030	197,093,029
9,497,591	8,161,940	7,311,256	35,354,311	35,983,529	21,722,476
91,819,081	47,791,682	63,757,536	170,042,852	149,016,160	127,962,951
19,039,791	27,651,755	28,387,747	55,411,487	64,272,208	74,652,188
105,561,485	113,845,317	142,336,127	205,213,617	215,530,983	265,368,833
30,296,947	34,374,524	21,567,418	76,630,411	88,454,139	56,793,336
223,533,091	142,169,549	153,588,503	485,082,107	337,909,365	367,823,873
27,284,638	43,148,702	54,171,620	89,814,764	135,137,547	177,733,817
1,900,252,314	**1,875,615,877**	**2,190,891,214**	**3,458,036,975**	**3,520,731,589**	**4,024,739,463**

Employees on Wages.			Wages Paid.		
1918.	1919.	1920.	1918.	1919.	1920.
No.	No.	No.	$	$	$
52,294	56,334	55,551	38,576,094	48,238,630	53,976,333
79,110	80,475	89,876	46,205,413	58,451,594	75,360,088
69,466	56,442	61,964	79,076,215	63,439,558	81,512,595
87,286	101,215	74,862	66,587,955	82,492,121	77,250,703
19,237	21,678	21,900	12,507,227	17,426,647	20,526,706
40,742	42,142	47,383	34,640,392	42,112,540	57,357,095
4,006	4,326	4,638	3,145,442	3,731,562	5,133,759
16,541	12,216	17,803	17,588,912	12,774,051	20,977,096
9,918	9,795	5,420	9,061,712	10,272,443	6,478,231
25,128	24,555	23,876	24,810,997	25,929,364	26,786,725
9,104	9,358	7,838	4,935,829	5,372,536	5,841,303
39,035	45,953	56,292	42,061,775	60,009,352	79,367,662
21,041	23,102	14,321	25,186,327	27,925,335	19,590,388
92,385	60,796	62,357	88,372,871	55,074,162	68,364,187
37,823	45,731	51,971	29,525,409	45,330,812	59,178,490
603,116	**594,118**	**596,052**	**522,287,570**	**558,580,707**	**657,701,361**

NOTE.—These statistics and those of the following Table may be compared with the corresponding statistics for 1915, given on pages 285-293 of the 1916-17 edition of the Year Book, under the reservation that in 1915 statistics were secured only from establishments having an output of $2,500 or over, except in the case of flour and grist mills, butter and cheese factories, fish preserving factories, saw-mills, brick and tile yards, lime kilns and electric light plants, in which cases all establishments were included. In the above Table, and in those that follow, all establishments in all industries are included.

7.—Statistics of the Numbers, Capital, Employees, Wages, Cost of Materials summary by

(New

No.	Groups and Kinds of Industries.	Establishments.	Capital.	Salaried Employees.	
				Number.	Salaries.
	1920.	No.	$		$
1	Vegetable products	4,233	396,305,898	10,988	18,926,082
2	Animal products	4,823	221,792,457	10,410	15,023,357
3	Textiles and textile products	4,528	321,750,003	9,656	19,463,114
4	Wood and paper	7,867	772,086,812	18,508	33,813,563
5	Iron and steel products	1,690	642,904,322	14,873	29,262,083
6	Non-ferrous metals and their products	324	109,382,033	4,309	7,227,211
7	Non-metallic mineral products	866	143,681,810	2,562	4,136,749
8	Chemicals and allied products	464	122,123,730	3,714	7,241,630
9	Miscellaneous industries	2,052	503,382,290	6,859	10,305,771
10	Construction, hand trades and repairs	16,353	209,866,698	7,418	12,954,218
	Total	**43,200**	**3,443,276,053**	**89,297**	**158,353,778**
	1921.				
1	Vegetable products	3,958	362,665,357	10,510	18,689,312
2	Animal products	5,051	200,697,527	10,354	15,722,980
3	Textiles and textile products	4,046	264,118,883	7,531	15,458,517
4	Wood and paper	7,152	775,207,859	16,571	31,976,579
5	Iron and its products	1,138	575,630,424	11,843	22,965,454
6	Non-ferrous metals and products	334	104,079,490	4,101	7,526,846
7	Non-metallic mineral products	764	126,989,134	2,227	3,858,940
8	Chemical and allied products	468	118,382,642	3,728	7,084,639
9	Miscellaneous industries	1,995	532,671,415	6,445	10,084,555
10	Construction, hand trades and repairs	16,407	150,216,557	3,467	6,743,069
	Total	**41,323**	**3,210,709,288**	**76,777**	**140,110,891**
	1. Vegetable Products	**3,958**	**362,665,357**	**10,510**	**18,689,312**
1	Biscuits and confectionery	372	30,655,589	1,710	2,797,541
2	Bread and other bakery products	1,658	23,551,215	1,261	1,798,705
3	Breakfast foods, prepared	9	3,390,160	53	117,729
4	Breweries	55	37,645,447	571	1,276,635
5	Chewing gum	4	2,497,112	76	203,713
6	Cocoa and chocolate	5	3,817,071	86	175,412
7	Coffee and spices	40	5,970,434	303	662,303
8	Distilleries	5	11,557,051	126	362,196
9	Flour and grist mill products	582	59,234,847	1,434	2,824,061
10	Chopping mills	675	2,592,465	–	–
11	Fruit and vegetable canneries	103	10,623,851	274	410,128
12	Fruit and vegetables evaporated	61	576,668	39	31,564
13	Grain foods prepared	4	112,852	7	14,418
14	Ice cream cones	11	375,945	21	33,022
15	Jams and jellies	46	6,551,207	174	311,063
16	Linseed oil and oil cake	8	2,509,124	43	74,321
17	Macaroni and vermicelli	8	1,105,095	42	50,290
18	Malt mills	7	2,246,223	24	57,947
19	Maple syrup and sugar	4	172,992	15	27,793
20	Nut preparing	8	359,500	18	21,443
21	Pickles and relishes	22	2,885,501	94	172,052
22	Rice mills	6	1,049,418	13	51,900
23	Rubber footwear	12	15,816,832	695	1,006,215
24	Rubber goods	23	38,420,786	952	1,805,205
25	Seed cleaning and preparing	12	1,720,163	97	180,264
26	Starch and glucose	7	5,887,210	68	113,610
27	Stock and poultry foods	21	956,400	90	129,714
28	Sugar refineries	7	35,783,067	333	765,456
29	Syrups	9	210,051	16	21,202
30	Tobacco, chewing and smoking	25	11,993,028	320	669,284
31	Tobacco, cigars and cigarettes	94	35,757,047	1,351	2,198,259
32	Vinegar and cider	38	2,921,462	91	143,574
33	Wines and grape juice	13	1,966,659	61	80,064
34	All other industries	4	1,752,885	52	102,229
	2. Animal products	**5,051**	**200,697,527**	**10,354**	**15,722,980**
1	Animal hair goods	6	662,876	19	55,961
2	Belting and hose, leather	7	1,429,936	67	105,301
3	Boot and shoe findings	6	229,224	6	9,995
4	Boots and shoes, leather	177	31,644,855	1,646	3,497,087
5	Butter and cheese	3,087	27,535,634	3,690	3,356,009
6	Condensed milk	27	7,722,197	128	212,227
7	Fish curing and packing	842	19,411,990	487	551,330
8	Fur dressing	13	452,803	31	61,457
9	Fur goods	219	9,598,311	576	989,683

and Value of Products of Canadian Manufacturing Industries, 1921 with groups for 1920.
Classification.)

Wage Earners.		Total Employees.		Cost of Materials.	Value of Products.		No.
Number.	Wages.	Number.	Salaries and Wages.		Net.	Gross.	
	$		$	$	$	$	
61,872	57,306,640	72,860	76,232,722	539,318,609	235,709,433	775,028,042	1
38,277	39,263,249	48,687	54,291,606	400,496,354	152,995,130	553,491,484	2
89,066	74,494,289	99,688	93,957,403	272,695,211	192,984,741	465,679,952	3
125,223	137,796,897	143,731	171,610,460	308,282,232	415,784,276	724,066,508	4
131,331	176,152,516	146,204	205,414,599	349,642,666	365,473,097	715,115,763	5
18,853	20,668,132	23,162	27,895,343	48,434,120	52,847,178	101,281,298	6
16,208	19,546,943	18,770	23,683,692	74,200,407	54,405,062	128,605,469	7
13,939	14,951,791	17,653	22,193,421	62,644,608	65,183,212	127,827,820	8
19,505	21,250,315	26,364	31,556,086	26,579,370	98,629,180	125,208,550	9
81,778	96,265,589	89,196	109,219,807	108,597,637	199,836,940	308,434,577	10
596,052	**657,701,361**	**686,315**	**816,055,139**	**2,190,891,214**	**1,833,848,249**	**4,024,739,463**	
50,987	44,800,947	61,497	63,490,259	367,759,058	206,141,228	573,900,286	1
35,372	32,401,687	45,726	48,124,667	267,878,165	111,534,101	379,412,266	2
71,346	57,046,408	78,877	72,504,925	174,174,208	142,676,574	316,850,782	3
94,751	99,113,282	111,322	131,089,861	203,856,170	283,260,565	487,116,735	4
65,237	75,398,529	77,080	98,363,983	194,725,179	187,672,905	382,398,084	5
13,835	15,165,938	17,936	22,692,784	31,439,989	41,149,894	72,589,883	6
13,755	15,942,151	15,982	19,801,091	67,780,080	47,776,911	115,556,991	7
8,843	9,107,818	12,571	16,192,457	43,108,870	45,495,135	88,604,005	8
16,551	18,701,095	22,996	28,785,650	18,989,818	101,562,721	120,552,539	9
69,687	73,613,639	73,154	80,356,708	76,592,585	134,352,519	210,945,104	10
440,364	**441,291,494**	**517,141**	**581,402,385**	**1,416,304,122**	**1,301,622,553**	**2,747,926,675**	
50,987	**44,800,947**	**61,497**	**63,490,259**	**367,759,058**	**206,141,228**	**573,900,286**	
9,533	6,936,458	11,243	9,733,999	22,600,821	24,157,193	46,758,014	1
8,436	9,483,319	9,697	11,282,024	29,202,936	22,164,981	51,367,917	2
209	265,732	262	383,461	1,469,274	1,411,511	2,880,785	3
2,456	3,076,978	3,027	4,353,613	9,714,486	21,217,367	30,931,853	4
171	144,870	247	348,583	1,123,206	1,290,200	2,413,406	5
463	420,663	549	596,075	2,323,516	1,238,322	3,561,838	6
499	427,595	802	1,089,898	7,569,914	2,856,550	10,426,464	7
331	396,922	457	759,118	2,161,525	5,299,320	7,460,845	8
4,724	5,124,771	6,158	7,948,832	153,445,024	26,187,222	179,632,246	9
848	362,352	848	362,352	11,137,612	4,002,991	15,140,603	10
1,330	975,241	1,604	1,385,369	5,688,504	4,020,709	9,709,213	11
292	149,174	331	180,738	353,726	498,703	852,429	12
21	14,490	28	28,908	178,540	96,907	275,447	13
103	84,901	124	117,923	355,731	355,832	711,563	14
564	418,832	738	729,895	3,270,539	1,951,643	5,222,182	15
249	250,657	292	324,978	4,239,255	1,984,121	6,223,376	16
180	140,145	222	190,435	820,200	629,511	1,449,711	17
157	248,945	181	306,892	2,019,577	773,840	2,793,417	18
20	20,362	35	48,155	201,366	126,180	327,546	19
87	48,625	105	70,068	388,953	205,082	594,035	20
554	358,535	648	530,587	1,829,061	1,345,601	3,174,662	21
34	33,738	47	85,638	964,100	281,665	1,245,765	22
4,360	2,941,654	5,055	3,947,869	4,637,137	9,214,607	13,851,744	23
3,791	4,006,292	4,743	5,811,497	12,219,987	13,398,055	25,618,042	24
239	179,102	336	359,366	3,635,663	692,902	4,328,565	25
629	667,498	697	781,108	2,716,292	1,720,036	4,436,328	26
74	65,662	164	195,376	594,281	553,923	1,148,204	27
2,136	2,417,438	2,469	3,182,894	56,882,242	12,627,585	69,509,827	28
28	30,642	44	51,844	262,648	171,705	434,353	29
2,268	1,084,502	2,588	1,753,786	8,064,946	6,845,060	14,910,006	30
5,867	3,647,144	7,218	5,845,403	15,374,386	36,675,858	52,050,244	31
164	180,401	255	323,975	862,116	1,146,874	2,008,990	32
67	76,345	128	156,409	350,098	356,191	706,289	33
103	120,962	155	223,191	1,101,396	642,981	1,744,377	34
35,372	**32,401,687**	**45,726**	**48,124,667**	**267,878,165**	**111,534,101**	**379,412,266**	
79	67,812	98	123,773	154,074	293,857	447,931	1
111	112,576	178	217,877	681,601	608,277	1,289,878	2
68	74,242	74	84,237	636,951	165,607	802,558	3
11,268	8,418,832	12,914	11,915,919	23,379,183	21,286,198	44,665,381	4
4,505	4,348,457	8,195	8,204,466	77,797,821	19,855,605	97,653,426	5
758	794 400	886	1,006,627	10,424,576	3,846,015	14,270,591	6
3,440	2,023,040	3,927	2,574,370	11,708,478	7,185,654	18,894,132	7
238	253,404	269	314,861	81,966	506,459	588,425	8
2,045	2,024,023	2,621	3,013,706	8,118,833	5,520,776	13,639,609	9

7.—Statistics of the Numbers, Capital, Employees, Wages, Cost of Materials

(New

No.	Groups and Kinds of Industries.	Establishments.	Capital.	Salaried Employees.	
				Number.	Salaries.
		No.	$		$
	2. Animal products—concluded.				
10	Gloves and mittens, leather	46	3,264,914	220	376,351
11	Harness and saddlery	353	6,384,460	274	349,170
12	Human hair goods	3	27,762	1	2,100
13	Leather goods, n.e.s.	31	932,986	88	167,839
14	Leather tanneries	119	32,137,488	380	913,787
15	Sausage and sausage casings	22	261,097	28	50,637
16	Slaughtering and meat packing	84	58,459,555	2,703	5,000,516
17	Tallow and animal oils	7	196,652	8	16,242
18	All other industries	2	341,787	2	7,288
	3. Textiles	**4,046**	**264,118,883**	**7,531**	**15,458,517**
1	Awnings, tents and sails	47	1,180,278	105	146,655
2	Bags, cotton and jute	16	4,819,054	104	242,132
3	Batting	3	694,703	13	32,533
4	Belting, cotton	3	188,217	6	10,400
5	Carpets, custom and rag	16	104,032	12	15,863
6	Carpets, rugs and mats	5	2,463,113	97	212,831
7	Clothing, men's custom	1,501	7,197,561	–	–
8	Clothing, men's factory	162	30,244,384	1,658	3,286,267
9	Clothing, oiled and waterproof	9	621,160	21	37,417
10	Clothing, women's custom	270	1,104,344	–	–
11	Clothing, women's factory	176	13,694,846	1,127	2,685,661
12	Cordage, rope and twine	9	7,861,066	83	184,548
13	Corsets	11	5,705,509	309	502,858
14	Cotton thread	4	3,292,363	64	139,457
15	Cotton yarn and cloth	31	65,947,429	403	921,691
16	Embroidery, lacework and trimmings	36	1,607,215	153	321,277
17	Fancy wear, ladies' and children's	49	2,996,364	292	608,477
18	Felt goods	3	2,188,436	40	103,664
19	Flax and hemp dressing	23	796,154	18	32,954
20	Furnishing goods, men's	82	11,800,238	504	1,040,144
21	Gaiters	9	415,394	28	37,423
22	Gloves, silk and other fabrics	7	1,774,768	59	114,652
23	Hats and caps	73	4,153,550	246	465,002
24	Hats and shapes, straw	14	1,222,513	74	142,895
25	Horse clothing	3	646,681	17	29,442
26	Hosiery and knitting mills	127	37,906,361	976	1,839,381
27	Lacings, tapes and bindings	11	787,427	38	83,072
28	Linen towels and napery	3	820,621	15	40,855
29	Men's suspenders, garters, elastic woven goods	12	851,290	54	68,803
30	Millinery	7	293,376	33	60,345
31	Millinery shops	1,126	2,292,806	–	–
32	Neckwear, men's	11	1,472,596	150	280,722
33	Neckwear and fancy goods, women's	5	233,542	33	56,784
34	Oilcloth and linoleum	3	6,351,871	86	251,208
35	Quilted goods	9	447,372	27	54,868
36	Shoddy	11	545,659	18	38,353
37	Silk and silk goods	5	4,559,909	61	136,071
38	Textiles, dyeing and finishing	5	371,820	–	–
39	Waste, cotton and wool	8	911,239	20	37,577
40	Waterproofs	13	2,068,242	76	108,635
41	Window blinds and shades	4	2,459,672	146	244,952
42	Wool carding and fulling	29	68,525	–	–
43	Wool pulling	7	548,890	8	13,808
44	Woollen cloth	69	22,878,830	292	689,270
45	Woollen yarns	16	5,495,582	61	135,905
46	All other industries	3	33,881	4	3,665
	4. Wood and Paper	**7,152**	**775,207,859**	**16,571**	**31,976,579**
1	Baskets and crates	28	984,544	39	63,611
2	Blue prints	16	153,903	24	30,402
3	Bobbins and spools	3	361,189	13	27,549
4	Boot and shoe findings	5	149,445	12	16,986
5	Boxes and packing cases	91	6,940,825	169	365,829
6	Boxes, cigar	4	690,504	27	45,587
7	Boxes, paper	89	11,022,338	452	893,223
8	Box shooks	4	332,841	8	19,161
9	Canoes, rowboats and launches	95	1,391,311	57	104,847
10	Carriages, wagons and sleighs	570	10,653,760	–	–
11	Carriages and sleds (children's)	7	489,120	41	72,115
12	Carriage and wagon materials	13	2,005,563	46	115,420

and Value of Products of Canadian Manufacturing Industries, 1921—continued.
Classification.)

Wage Earners.		Total Employees.		Cost of Materials.	Value of Products.		No.
Number.	Wages.	Number.	Salaries and Wages.		Net.	Gross.	
	$		$	$	$	$	
962	562,432	1,182	938,783	1,455,309	1,239,507	3,694,816	10
988	1,017,150	1,262	1,366,320	3,526,451	2,176,671	5,703,122	11
20	14,160	21	16,260	21,083	36,705	57,788	12
420	323,873	508	491,712	509,145	761,449	1,270,594	13
3,327	3,167,275	3,707	4,081,062	15,157,358	7,748,170	22,905,528	14
119	119,037	147	169,674	550,600	338,704	889,304	15
6,988	8,547,262	9,691	13,547,778	113,389,835	39,746,454	153,136,289	16
25	25,822	33	42,064	175,429	129,030	304,459	17
11	7,899	13	15,178	109,472	88,963	198,435	18
71,346	**57,646,498**	**78,877**	**72,594,925**	**174,174,208**	**142,676,574**	**316,859,782**	
278	251,410	383	393,065	679,238	619,507	1,298,745	1
744	562,239	848	804,371	7,198,203	1,690,788	8,888,991	2
67	63,446	80	95,979	212,536	240,276	452,812	3
16	13,943	22	24,343	61,522	41,421	102,943	4
62	41,845	74	57,708	6,971	120,365	127,336	5
563	547,187	660	760,018	1,322,099	1,852,486	3,174,585	6
5,302	4,769,606	5,302	4,769,606	6,985,352	8,535,757	15,521,109	7
8,463	8,765,158	10,121	12,051,425	29,929,415	13,837,154	43,766,569	8
109	105,480	130	142,897	150,432	446,706	597,138	9
1,165	974,026	1,165	974,026	1,366,347	1,745,027	3,111,374	10
7,357	7,526,444	8,484	10,212,105	18,617,634	16,638,392	35,256,026	11
741	870,914	824	1,055,462	4,620,408	3,342,142	7,962,550	12
1,141	590,285	1,450	1,093,143	2,805,837	2,657,888	5,463,725	13
420	269,707	484	409,164	2,024,110	1,339,586	3,363,696	14
14,735	10,584,546	15,138	11,506,237	35,157,233	30,821,363	65,978,596	15
819	576,602	972	897,879	743,943	1,656,107	2,400,050	16
1,392	851,059	1,684	1,459,536	3,030,640	2,476,267	5,506,907	17
180	154,921	220	258,585	368,212	634,744	1,002,956	18
242	163,642	260	196,596	184,230	288,872	473,102	19
4,358	2,342,673	4,862	3,382,817	10,229,398	7,716,895	17,946,293	20
82	72,131	110	109,554	246,923	272,563	519,486	21
735	464,672	794	579,324	581,454	988,489	1,569,943	22
1,233	1,240,026	1,479	1,705,028	3,130,028	3,078,280	6,208,308	23
572	545,621	646	688,516	1,353,225	1,409,091	2,762,316	24
119	70,507	136	99,949	454,447	131,663	586,110	25
9,470	6,559,892	10,446	8,399,273	18,960,491	17,729,043	36,689,534	26
156	137,867	194	220,939	529,936	428,956	958,892	27
187	137,156	202	178,011	195,698	360,916	556,614	28
197	152,250	251	221,053	561,404	373,602	935,006	29
170	134,675	203	195,020	324,428	395,647	720,075	30
2,557	1,384,215	2,557	1,384,215	3,099,791	3,116,685	6,216,476	31
226	204,602	376	485,324	1,076,471	916,776	1,993,247	32
144	108,013	177	164,797	267,289	280,564	547,853	33
423	541,460	509	792,668	2,966,826	2,687,686	5,654,512	34
105	76,371	132	131,239	465,287	243,569	708,856	35
69	69,761	87	108,114	194,656	173,433	368,089	36
871	583,774	932	719,845	1,890,171	1,646,342	3,536,513	37
65	97,038	–	97,038	195,402	269,616	465,018	38
101	89,437	121	127,014	1,060,937	344,135	1,405,072	39
166	185,139	242	293,774	660,466	656,417	1,316,883	40
230	196,890	376	441,842	1,701,932	1,237,677	2,939,609	41
21	9,897	21	9,897	179	29,773	29,952	42
56	59,034	64	72,842	231,066	138,071	369,137	43
4,353	3,268,873	4,645	3,958,143	6,329,679	7,366,621	13,696,300	44
869	625,777	930	761,682	1,957,193	1,680,668	3,637,861	45
15	6,197	19	9,862	45,069	18,548	63,617	46
94,751	**99,113,282**	**111,322**	**131,089,861**	**203,856,170**	**283,260,565**	**487,116,735**	
314	357,059	353	420,670	459,450	953,175	1,412,625	1
53	43,509	77	73,911	121,141	149,336	270,477	2
125	147,831	138	175,380	133,496	241,815	375,311	3
64	41,784	76	58,770	89,035	102,999	192,034	4
1,770	1,693,514	1,939	2,059,343	3,611,012	3,467,545	7,078,557	5
179	193,953	206	239,540	431,551	384,045	815,596	6
2,873	2,002,154	3,325	2,895,377	4,445,732	5,687,445	10,133,177	7
53	63,496	61	82,657	285,236	142,697	427,933	8
464	542,013	521	646,860	370,570	1,003,675	1,374,245	9
2,298	2,373,358	2,298	2,373,358	3,408,123	4,286,215	7,694,338	10
172	145,154	213	217,269	226,795	341,599	568,394	11
242	296,995	288	412,415	719,446	1,143,320	1,862,766	12

7.—Statistics of the Numbers, Capital, Employees, Wages, Cost of Materials

(New

No.	Groups and Kinds of Industries.	Establishments.	Capital.	Salaried Employees.	
				Number.	Salaries.
		No.	$		$
	4. Wood and Paper—concluded.				
13	Coffins and caskets	28	2,595,825	58	109,679
14	Cooperage	98	2,222,959	60	98,683
15	Cork products	6	1,074,427	31	54,164
16	Foundry patterns	34	216,027	26	40,636
17	Furniture (other than wickerware)	153	26,821,580	1,001	1,879,556
18	Furniture upholstering and repairing	192	2,057,375	55	100,016
19	Handles, wooden	18	776,055	23	36,454
20	Lasts, trees and pegs	9	1,464,259	40	86,073
21	Lithographing and engraving	85	7,949,016	527	1,161,258
22	Paper goods, n.e.s.	4	194,541	14	24,036
23	Paper mills	33	22,622,212	263	750,170
24	Paper patterns	6	810,014	56	74,634
25	Printing and bookbinding	625	28,275,937	1,773	3,743,220
26	Printing and publishing	836	38,788,973	5,456	8,483,467
27	Pulleys	3	37,123	3	5,800
28	Pulp and paper mills	27	223,636,392	1,570	4,409,064
29	Pulp mills	40	133,554,147	520	1,204,070
30	Pumps, wooden	35	1,629,603	35	51,225
31	Saw, lath and shingle mills	3,126	186,019,994	2,152	3,940,940
32	Show cases and store fixtures	19	1,242,568	59	152,906
33	Spinning wheels	4	11,700	–	–
34	Stationery and envelopes	12	2,851,801	262	471,939
35	Stereotyping and electrotyping	10	437,249	48	83,695
36	Wallboard, building paper, etc	14	6,368,840	213	459,497
37	Wall paper	4	2,506,994	162	460,457
38	Waxed and oiled paper	7	1,185,359	100	177,833
39	Wickerware	8	209,261	8	32,306
40	Woodenware	12	738,190	38	51,390
41	Wood preserving	3	1,469,781	7	11,819
42	Wood products, miscellaneous	6	524,719	21	50,333
43	Woodworking, sash and door factories	758	41,239,799	1,076	1,943,272
44	All other industries	12	499,796	26	73,257
	5. Iron and its products	**1,138**	**575,680,424**	**11,843**	**22,965,454**
1	Agricultural implements	75	94,129,064	1,343	2,444,921
2	Automobiles and motor trucks	14	40,080,269	1,026	1,402,536
3	Automobile accessories	64	15,700,288	408	980,549
4	Bicycles and motorcycles	5	2,273,307	52	90,149
5	Boilers, engines and tanks	39	9,783,160	340	688,219
6	Brakes and brakeshoes	3	211,080	13	25,224
7	Calculating machines	8	5,651,718	266	454,242
8	Car wheels	7	4,652,039	78	166,074
9	Cream separators	6	5,238,460	281	358,889
10	Elevators	5	2,097,071	74	116,399
11	Foundries and machine shops	325	62,152,439	1,661	3,503,196
12	Hardware and tools	114	30,573,705	782	1,547,671
13	Industrial machinery	112	40,000,370	1,178	2,316,111
14	Heating and ventilating apparatus	54	24,159,408	896	1,648,186
15	Iron and steel fabrication	52	10,288,526	528	1,051,120
16	Pumps and wind mills	9	918,164	40	77,430
17	Blast furnaces and steel mills	39	121,859,860	608	1,529,615
18	Scales	9	1,941,005	85	135,011
19	Sheet metal products	129	27,681,041	960	1,797,419
20	Steam railway cars	11	52,873,569	666	1,565,738
21	Washing machines and wringers	10	1,874,919	71	147,603
22	Wire and wire goods	44	17,009,842	377	725,729
23	All other industries	4	4,531,120	110	193,423
	6. Non-ferrous metals and products	**344**	**104,079,490**	**4,111**	**7,526,846**
1	Aluminium ware	8	8,131,088	110	182,787
2	Babbitt and solder	13	2,166,952	132	181,699
3	Brass and copper foundries	39	11,458,342	333	650,717
4	Brass and copper products, n.e.s.	33	6,093,809	288	494,752
5	Clocks, watches and movements	4	1,130,967	24	61,486
6	Dental gold and alloys	7	236,438	23	41,872
7	Electrical apparatus and supplies	96	62,725,361	2,431	4,598,642
8	Electroplating	24	220,999	35	44,264
9	Gold and silver goods, n.e.s.	5	364,285	22	42,624
10	Jewelry manufacture	66	4,681,170	281	443,242
11	Lead pipe and sheet lead	3	710,926	46	62,202
12	Lead, tin and zinc goods, n.e.s.	3	302,271	8	12,903
13	Lightning rods	8	565,983	67	90,203

and Value of Products of Canadian Manufacturing Industries, 1921—continued.
Classification.)

Wage Earners.		Total Employees.		Cost of Materials.	Value of Products.		No.
Number.	Wages.	Number.	Salaries and Wages.		Net.	Gross.	
	$		$	$	$	$	
377	446,091	435	555,770	816,916	1,149,930	1,966,846	13
553	541,970	613	640,653	1,230,292	1,127,258	2,357,550	14
158	171,221	189	225,385	544,137	502,206	1,046,343	15
125	170,159	151	210,795	46,129	305,560	351,689	16
5,712	5,812,229	6,713	7,691,785	7,924,244	14,153,541	22,077,785	17
525	560,431	580	660,447	604,576	1,293,008	1,897,584	18
141	163,617	164	200,071	214,366	510,593	724,959	19
227	224,728	267	310,801	145,741	497,756	643,497	20
1,950	2,585,118	2,477	3,746,376	2,843,644	6,902,573	9,746,217	21
47	19,773	61	43,809	104,538	165,455	269,993	22
2,466	2,331,380	2,729	3,081,550	7,263,649	7,785,064	15,048,713	23
134	109,607	190	184,241	177,202	1,132,365	1,309,567	24
7,718	8,902,429	9,491	12,645,649	10,853,841	22,560,591	33,414,432	25
8,155	10,093,957	13,611	18,577,424	15,412,712	38,200,349	53,613,061	26
8	9,625	11	15,425	11,958	27,240	39,198	27
13,977	18,905,719	15,547	23,314,783	40,780,039	62,343,072	103,123,111	28
5,815	6,598,687	6,335	7,802,757	14,232,536	18,598,805	32,831,341	29
98	108,446	133	159,671	88,908	317,402	406,310	30
28,185	22,766,749	30,337	26,707,689	57,242,686	59,648,505	116,891,191	31
276	346,763	335	499,669	446,979	1,092,608	1,539,587	32
4	1,920	4	1,920	1,490	5,324	6,814	33
708	635,199	970	1,107,138	2,229,384	2,162,777	4,392,161	34
112	192,348	160	276,043	83,334	537,154	620,488	35
548	659,707	761	1,119,204	3,974,893	3,490,589	7,465,482	36
400	346,853	562	807,310	1,130,648	1,852,658	2,983,306	37
171	212,237	271	390,070	1,041,561	569,070	1,610,631	38
67	111,321	75	143,627	159,583	237,712	397,295	39
156	192,981	194	244,371	198,340	451,326	649,666	40
42	53,736	49	65,555	691,055	326,716	1,017,771	41
86	91,058	107	141,391	161,174	212,009	373,183	42
7,146	7,778,033	8,222	9,721,305	18,434,190	16,751,945	35,186,135	43
57	68,370	83	141,627	463,838	445,538	909,376	44
65,237	**75,398,529**	**77,089**	**98,363,983**	**194,725,179**	**187,672,905**	**382,398,084**	
7,154	8,534,403	8,497	10,979,324	17,946,282	18,816,878	36,763,160	1
4,449	6,484,637	5,475	7,887,173	45,119,345	21,930,864	67,050,209	2
1,824	2,254,636	2,232	3,235,185	8,229,855	6,553,162	14,783,017	3
200	219,981	252	310,130	329,692	379,113	708,805	4
2,765	1,767,550	3,105	2,455,769	2,479,032	4,481,138	6,960,170	5
88	44,571	101	69,795	233,387	105,958	339,345	6
202	285,742	468	739,984	603,701	2,117,015	2,720,716	7
485	630,421	563	796,495	2,072,259	1,842,930	3,915,189	8
226	247,724	507	606,613	693,410	911,796	1,605,206	9
255	290,055	329	406,454	399,377	812,573	1,211,950	10
10,131	11,696,862	11,792	15,200,058	17,221,919	24,983,356	42,205,275	11
3,834	3,491,416	4,616	5,039,087	3,941,978	9,103,908	13,045,886	12
4,057	5,094,751	5,235	7,410,862	6,011,038	15,597,180	21,608,218	13
4,936	4,717,871	5,832	6,366,057	4,777,045	11,342,338	16,119,383	14
2,047	2,374,329	2,575	3,425,449	4,032,935	5,316,815	9,349,750	15
153	145,333	193	222,763	214,845	364,757	579,602	16
5,859	8,440,745	6,467	9,970,360	34,820,791	21,381,019	56,201,810	17
257	271,013	342	406,024	217,890	873,675	1,091,565	18
4,414	4,618,054	5,374	6,415,473	13,219,712	13,555,224	26,774,936	19
7,965	10,037,590	8,631	11,603,328	22,910,095	17,335,736	40,245,831	20
219	227,227	290	374,830	444,894	875,634	1,320,528	21
2,611	2,489,505	2,988	3,215,234	7,455,336	7,329,555	14,784,891	22
1,106	1,034,113	1,216	1,227,536	1,350,361	1,662,281	3,012,642	23
13,835	**15,165,938**	**17,946**	**22,692,784**	**31,439,989**	**41,149,894**	**72,589,883**	
371	426,383	481	609,170	1,704,432	1,929,184	3,633,616	1
212	304,195	344	485,894	1,369,357	934,659	2,304,016	2
1,257	1,322,625	1,590	1,973,342	2,586,753	3,457,051	6,043,804	3
1,160	1,244,740	1,448	1,739,492	1,345,424	2,567,637	3,913,061	4
270	226,435	294	287,921	342,709	515,433	858,142	5
38	42,973	61	84,845	490,460	115,517	605,977	6
8,120	8,858,410	10,551	13,457,052	19,215,137	25,282,131	44,497,268	7
115	118,038	150	162,302	25,837	229,887	255,724	8
36	37,100	58	79,724	172,097	126,779	298,876	9
1,075	1,263,264	1,356	1,706,506	2,091,096	2,604,248	4,695,344	10
73	89,211	119	151,413	236,014	212,721	448,735	11
40	32,352	48	45,255	49,271	84,393	133,664	12
28	39,418	95	129,621	250,329	265,533	515,862	13

7.—Statistics of the Numbers, Capital, Employees, Wages, Cost of Materials

(New

No.	Groups and Kinds of Industries.	Number of Establishments.	Capital Employed.	Salaried Employees.	
				Number.	Salaries.
		No.	$		$
	6. Non-ferrous metals and products—concluded				
14	Metal lamps and lanterns	6	538,892	33	65,422
15	Metal weather stripping	12	126,589	9	15,497
16	Silverware and silver plated ware	12	3,737,349	244	504,513
17	Vacuum cleaners	4	884,169	23	32,421
18	All other industries	1	3,900	2	1,600
	7. Non-metallic mineral products	**764**	**125,989,134**	**2,227**	**3,858,940**
1	Abrasive products	5	873,117	23	42,311
2	Aerated waters	320	8,236,946	349	578,356
3	Asbestos packing	7	471,769	18	30,576
4	Asbestos products, n.e.s.	4	879,509	25	57,033
5	Cement products	108	1,416,813	54	74,125
6	Coke	5	–	95	283,554
7	Gas, illuminating and fuel	50	37,097,280	751	904,942
8	Glass plate, cut and ornamental	37	1,660,204	142	198,030
9	Glass	11	12,065,278	149	349,982
10	Lubricating oils	5	1,933,724	45	112,825
11	Mica	10	594,398	14	18,755
12	Petroleum refining	11	55,630,864	334	724,045
13	Plaster casting and models	5	244,878	16	45,878
14	Sand-lime brick	10	1,372,253	21	52,917
15	Stone cutting and dressing	173	3,971,172	177	369,190
16	All other industries	3	540,929	14	16,421
	8. Chemical products	**468**	**118,382,642**	**3,728**	**7,084,639**
1	Abrasives, artificial	5	3,245,616	27	59,105
2	Adhesives	17	1,898,848	53	90,410
3	Ammunition	5	4,503,012	74	132,471
4	Baking powder	7	1,461,477	133	194,531
5	Boiler compounds	6	200,702	19	35,198
6	Cellulose products	9	1,670,561	44	87,461
7	Chemicals, industrial	24	29,945,120	245	576,609
8	Chemical products, n.e.s.	8	178,326	21	30,114
9	Coal tar distillation	4	1,411,618	15	33,433
10	Disinfectants	5	91,052	16	19,782
11	Dyes and colours	7	468,358	44	66,109
12	Explosives	10	6,265,010	78	169,377
13	Fertilizers	15	3,209,240	91	152,608
14	Fireworks	5	173,508	12	39,593
15	Flavouring extracts	19	1,473,632	148	225,277
16	Gases compressed	26	4,218,484	164	295,673
17	Insect powders	10	142,152	13	17,688
18	Inks (printers and rollers)	12	1,399,468	71	241,589
19	Inks (writing)	7	215,871	21	35,997
20	Paints and varnishes	49	20,330,951	819	1,893,278
21	Patent medicines	103	12,903,071	822	1,347,716
22	Polishes and dressings	33	1,399,445	130	205,519
23	Soap	28	14,499,010	471	780,263
24	Toilet preparations	20	1,359,544	98	179,382
25	Sweeping compounds	5	67,304	4	6,883
26	Washing compounds	15	256,111	24	55,929
27	Wood distillation	10	2,693,924	35	53,391
28	All other industries	4	2,701,227	36	59,253
	9. Miscellaneous Industries	**1,995**	**532,671,415**	**6,445**	**10,084,555**
1	Advertising and other novelties	6	57,058	8	10,802
2	Artificial flowers and feathers	6	328,491	46	68,353
3	Artificial limbs and trusses	16	265,750	39	54,211
4	Billiard tables and supplies	4	1,168,673	20	30,547
5	Brooms and brushes	73	3,438,812	224	420,112
6	Buttons	20	1,212,229	65	139,556
7	Candles and tapers	9	160,342	11	23,555
8	Electric light and power	857	484,669,451	4,620	6,780,916
9	Fountain pens	4	1,449,168	98	119,135
10	Ice, artificial	18	1,775,266	74	188,857
11	Jewelry cases and silverware cabinets	5	178,185	19	37,090
12	Mattresses and springs	50	4,305,151	211	408,379
13	Mops	3	89,198	5	11,805
14	Motion picture films	4	78,198	9	16,246
15	Musical instruments	39	8,631,767	206	409,042
16	Musical instrument materials	10	1,485,797	30	83,579

and Value of Products of Canadian Manufacturing Industries, 1921—continued.
Classification.)

Wage Earners.		Total Employees.		Cost of Materials.	Value of Products.		No.
Number.	Wages.	Number.	Salaries and Wages.		Net.	Gross.	
	$		$	$	$	$	
87	104,418	120	169,840	198,897	216,361	415,258	14
32	34,322	41	49,819	51,699	90,463	142,162	15
855	955,815	1,099	1,460,328	1,084,758	2,142,814	3,227,572	16
66	66,239	89	98,660	223,551	372,772	596,323	17
–	–	2	1,600	2,168	2,311	4,479	18
13,755	**15,942,151**	**15,982**	**19,801,091**	**67,789,089**	**47,776,911**	**115,556,991**	
56	63,262	79	105,573	69,901	101,048	170,949	1
1,831	1,233,627	2,180	1,811,983	3,607,147	5,569,721	9,176,868	2
59	61,234	77	91,810	152,849	122,961	275,810	3
30	124,679	55	181,712	232,961	295,862	528,823	4
611	332,620	665	406,745	555,915	877,338	1,433,253	5
552	939,235	647	1,222,789	11,176,955	3,338,904	14,515,859	6
2,067	3,080,034	2,818	3,984,976	9,279,697	9,492,588	18,772,285	7
393	469,140	535	667,170	874,260	1,014,215	1,888,475	8
2,412	2,604,616	2,561	2,954,598	3,100,098	6,473,359	9,573,457	9
58	66,130	103	178,955	778,923	588,089	1,367,012	10
239	76,487	253	95,242	136,184	96,311	232,495	11
3,577	5,279,514	3,911	6,003,559	35,850,653	15,714,750	51,565,403	12
87	107,851	103	153,729	255,499	275,947	531,446	13
242	179,996	263	232,913	139,008	523,736	662,744	14
1,507	1,283,647	1,684	1,652,837	1,478,097	3,061,931	4,540,028	15
34	40,079	48	56,500	91,933	230,151	322,084	16
8,843	**9,107,818**	**12,571**	**16,192,457**	**43,108,870**	**45,495,135**	**88,604,005**	
144	190,312	171	249,417	422,986	544,231	967,217	1
169	161,592	222	252,002	485,685	691,527	1,177,212	2
751	614,305	825	746,776	777,160	1,508,213	2,285,373	3
242	214,930	375	409,461	1,079,505	1,402,060	2,481,565	4
10	12,354	29	47,552	77,137	178,759	255,896	5
223	163,451	267	250,912	668,997	749,906	1,418,903	6
1,251	1,919,407	1,496	2,496,016	5,034,729	6,832,539	11,867,268	7
17	16,360	38	46,474	213,238	112,367	325,605	8
73	92,288	88	125,721	420,498	668,291	1,088,789	9
10	8,196	26	27,978	35,976	58,365	94,341	10
35	25,897	79	92,006	203,688	255,519	459,207	11
355	444,625	433	614,002	4,294,118	2,107,334	6,401,452	12
182	217,045	273	369,653	1,696,205	981,530	2,677,735	13
40	32,900	52	72,493	74,879	119,354	194,233	14
114	89,560	262	314,837	896,188	605,192	1,501,380	15
154	213,259	318	508,932	301,839	1,700,059	2,001,898	16
10	9,302	23	26,990	71,975	77,085	149,060	17
139	178,322	210	419,911	720,777	1,044,156	1,764,933	18
43	34,296	64	70,293	129,730	179,610	309,340	19
1,412	1,406,311	2,231	3,299,589	9,714,521	8,329,804	18,044,325	20
1,408	1,182,182	2,230	2,529,898	4,466,001	7,479,434	11,945,435	21
136	123,897	266	329,416	741,607	703,619	1,445,226	22
985	956,826	1,456	1,737,089	7,695,474	5,515,940	13,211,414	23
238	138,622	336	318,004	670,000	1,086,300	1,756,300	24
6	7,932	10	14,815	56,660	62,031	118,691	25
53	49,044	77	104,973	117,230	222,877	340,107	26
238	273,530	273	326,921	986,547	1,214,841	2,201,388	27
405	331,073	441	390,326	1,055,520	1,064,192	2,119,712	28
16,551	**18,701,095**	**22,996**	**28,785,650**	**18,989,818**	**101,562,721**	**120,552,539**	
40	28,616	48	39,418	53,519	64,287	117,806	1
157	104,344	203	172,697	160,490	294,371	454,861	2
76	67,403	115	121,614	89,835	265,874	355,709	3
136	156,971	156	187,518	451,918	639,930	1,091,848	4
870	652,797	1,094	1,072,909	1,827,944	1,960,505	3,788,449	5
425	283,732	490	423,288	359,661	880,153	1,239,814	6
37	28,626	48	52,181	77,496	109,698	187,194	7
6,094	8,453,762	10,714	15,234,678	–	73,636,094	73,636,094	8
261	217,595	359	336,730	446,311	651,926	1,098,237	9
228	313,391	302	502,248	46,368	1,106,881	1,153,249	10
73	66,183	92	103,273	42,070	144,880	186,950	11
1,138	1,190,211	1,349	1,598,590	3,665,562	3,502,854	7,168,416	12
18	15,091	23	26,896	69,262	45,535	114,797	13
32	54,026	41	70,272	67,913	116,011	183,924	14
1,646	1,702,271	1,852	2,111,313	2,889,344	3,126,428	6,015,772	15
340	343,929	370	427,508	512,525	662,427	1,174,952	16

7.—Statistics of the Numbers, Capital, Employees, Wages, Cost of Materials

(New

No.	Groups and Kinds of Industries.	Number of Establishments.	Capital Employed	Salaried Employees.	
				Number.	Salaries.
		No.	$		$
	Miscellaneous Industries—concluded.				
17	Phonographs	14	3,697,811	113	223,280
18	Photography	549	1,635,377	–	–
19	Picture framing	64	358,532	–	–
20	Pipes, tobacco	5	50,647	4	6,728
21	Refrigerators	12	2,813,226	78	134,566
22	Regalias and society emblems	8	156,386	19	25,480
23	Rubber stamps and steel stencils	26	486,124	68	99,154
24	Scientific and professional equipment	5	7,782,901	176	225,376
25	Signs	119	1,305,465	–	–
26	Sporting and athletic goods	13	687,019	41	50,030
27	Statuary and art goods	13	241,758	28	42,653
28	Store and display forms	3	113,352	10	19,244
29	Toys and games	7	193,824	23	20,896
30	Trunks and valises	13	2,104,832	85	189,406
31	Typewriters and supplies	5	474,250	22	56,717
32	Umbrellas and parasols	7	461,488	40	91,141
33	All other industries	8	814,887	53	97,699
	10. Construction, Hand Trades and Repairs	**16,497**	**159,216,557**	**3,467**	**6,743,069**
1	Automobile repairs	2,716	7,773,825	–	–
2	Bicycle repairs	170	210,017	–	–
3	Blacksmithing	4,099	6,521,657	–	–
4	Boot and shoe repairs	1,990	1,361,769	–	–
5	Bridges, iron and steel	14	16,550,077	456	1,020,564
6	Dyeing, cleaning and laundry work	530	7,498,834	–	–
7	Electrical contracts and repairs	336	1,871,112	–	–
8	Elevator repairs	13	1,138,700	75	142,311
9	Harness and saddlery repairs	545	1,799,295	7	4,189
10	House-building and construction	1,501	50,896,653	2,434	4,334,658
11	Jewelry repairs	1,233	1,067,544	–	–
12	Lock and gunsmithing repairs	23	82,599	10	12,892
13	Painting, glazing and paperhanging	1,034	2,807,311	–	–
14	Plumbing and tinsmithing	2,137	12,219,038	–	–
15	Roofing contracts	28	412,343	34	64,030
16	Shipbuilding and repairs	38	38,005,783	451	1,164,425

3.—Capital Employed.

In a retrospective study of capital employed in Canadian manufactures since 1900, the remarkable increase denotes rapid growth in the industrial operations. From 1900 to 1905, the capital increased from $446,900,000 to $833,900,000 and advanced to $1,958,700,000 in 1915. During this period returns were received from establishments with five hands and over, and while the rise of wholesale prices did not exceed 37 p.c. the capital employed in manufactures increased nearly 340 p.c.

The capital used during 1921 in all establishments, irrespective of the number of employees, was $3,210,700,000, compared with $1,994,100,000 in 1915, an increase of more than 60 p.c. in seven years. While price levels were higher in 1921 than in 1915, it should be remembered that a considerable part of the industrial capital of the country was inactive in 1921 and consequently not included in the statistics.

The provincial distribution of the manufactures of Canada is illustrated by the capital invested in the operation of the plants. Capital employed in Ontario during 1919 was 49·0 p.c. of the total, increasing to 49·5 p.c. in 1920 and 50·5 p.c. in 1921. The proportion of the total capital employed in the plants of Quebec was 29·0 p.c. in 1919, 30·0 p.c. in 1920 and 30·3 p.c. in 1921. British Columbia held third place, with a capital of 6·6 p.c. of the total, in 1921, while Nova Scotia,

and Value of Products of Canadian Manufacturing Industries, 1921—concluded.
Classification)

Wage Earners.		Total Employees.		Cost of Materials.	Value of Products.		No.
Number.	Wages.	Number.	Salaries and Wages.		Net.	Gross.	
	$		$	$	$	$	
399	437,567	512	660,847	1,323,902	1,934,444	3,258,346	17
1,075	887,229	1,075	887,229	855,728	2,241,811	3,097,539	18
189	184,690	189	184,690	248,808	390,622	639,430	19
49	49,092	53	55,820	48,237	77,629	125,866	20
419	463,402	497	597,968	899,289	1,430,814	2,330,103	21
63	50,330	82	75,810	121,252	142,411	263,663	22
165	196,013	233	295,167	118,839	436,662	555,501	23
735	716,579	911	941,955	1,801,614	2,371,715	4,173,329	24
724	927,896	724	927,896	358,781	2,083,177	2,441,958	25
198	170,027	239	220,057	372,950	482,746	855,696	26
129	147,506	157	190,159	97,161	268,076	365,237	27
43	54,708	53	73,952	54,434	114,517	168,951	28
51	38,205	74	59,101	70,893	74,620	145,513	29
539	513,458	624	702,864	838,000	1,388,474	2,226,474	30
44	46,669	66	103,416	250,977	218,369	469,346	31
64	54,979	104	146,120	358,305	307,543	665,848	32
94	83,767	147	181,466	410,430	391,237	801,667	33
69,687	**73,613,639**	**73,154**	**80,356,708**	**76,592,585**	**134,352,519**	**210,945,104**	
7,188	5,940,102	7,188	5,940,102	7,515,942	10,989,970	18,50ɔ,912	1
235	169,652	235	169,652	155,145	349,259	504,404	2
4,936	3,966,287	4,936	3,966,287	2,026,908	6,606,707	8,633,615	3
2,575	1,964,583	2,575	1,964,583	1,525,072	3,352,326	4,877,398	4
1,576	2,279,097	2,032	3,299,661	5,971,417	6,077,357	12,048,774	5
6,807	6,150,698	6,807	6,150,698	1,600,800	11,812,987	13,413,787	6
1,278	1,507,625	1,278	1,507,625	2,327,454	2,726,749	5,054,203	7
196	246,651	271	388,962	1,284,840	629,113	1,913,953	8
565	341,504	572	345,693	334,407	605,556	939,963	9
26,583	30,652,227	29,017	3,496,885	31,155,060	54,069,271	85,224,331	10
1,917	1,546,081	1,917	1,546,081	433,445	2,812,123	3,245,568	11
33	31,437	43	44,329	18,588	77,464	96,052	12
3,392	3,471,956	3,392	3,471,956	2,157,058	5,822,345	7,979,403	13
6,935	7,828,108	6,935	7,828,108	13,777,756	14,482,570	28,260,326	14
178	200,894	212	264,924	322,664	415,692	738,356	15
5,293	7,316,737	5,744	8,481,162	5,986,029	13,523,030	19,509,059	16

New Brunswick and Manitoba followed in the order named, with proportions of between 3 p.c. and 4 p.c. each.

In a survey of the industrial groups in which the capital of the country is invested, it appears that the wood and paper group led in 1921, with an investment of 24·1 p.c. of the total. The iron and steel group was second, with 17·9 p.c. In 1920, the wood and paper group employed 22·4 p.c. and the iron and steel group 18·7 p.c. of the total capital. Thus the expansion of the wood and paper group continued, in spite of the depression which affected a majority of the other groups. The proportion of the capital employed by the miscellaneous group, including the electric power industry, increased from 14·6 p.c. in 1920 to 16·6 p.c. in 1921.

The statistics of capital employed in the manufacturing industries are of interest in deducing the proportions of fixed and liquid assets. In 1920 lands, buildings and machinery constituted 53·6 p.c. of the total capital, while in 1921 the proportion increased to 58·9 p.c. Fixed assets increased from $1,844,000,000 to $1,892,000,000, while quick assets, including the materials on hand, stock in process, cash and sundries, declined from $1,598,000,000 to $1,249,000,000. These results indicate that the value of real property utilized in manufactures continued to increase, while writing down of inventories and decline of working capital is characteristic of a period of depression.

8.—Capital Employed in the Manufacturing Industries of Canada in Percentages, by Provinces 1915, 1917-1921.

Provinces.	1915.	1917.	1918.	1919.	1920.	1921.
Prince Edward Island	·1	·1	·1	·1	·1	·1
Nova Scotia	6·4	4·9	4·4	4·1	4·3	3·3
New Brunswick	2·3	2·4	2·4	2·8	3·2	3·2
Quebec	27·5	29·6	28·3	29·0	30·0	30·3
Ontario	48·0	47·9	49·7	49·0	49·5	50·5
Manitoba	4·8	3·6	3·5	3·4	3·4	3·2
Saskatchewan	·8	1·2	1·3	1·1	1·2	1·1
Alberta	2·1	2·3	2·0	2·1	1·8	1·7
British Columbia	8·0	7·9	8·1	8·3	6·5	6·6
Yukon	–	·1	·2	·1	–	–
Totals	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**

9.—Capital Employed in the Manufacturing Industries of Canada, by Industrial Groups, 1920-1921.

Industrial Groups.	1920.		1921.	
	Amount.	Per-centage.	Amount.	Per-centage.
	$		$	
Vegetable products	396,365,898	11·5	362,665,357	11·3
Animal products	221,792,457	6·4	200,697,527	6·3
Textiles	321,750,003	9·3	264,118,883	8·2
Wood and paper	772,086,812	22·4	775,207,859	24·1
Iron and steel	642,904,322	18·7	575,680,424	17·9
Non-ferrous metals	109,382,033	3·2	104,079,490	3·2
Non-metallic minerals	143,681,810	4·2	126,989,134	4·0
Chemicals and allied products	122,123,730	3·6	118,382,642	3·7
Miscellaneous industries	503,382,290	14·6	532,671,415	16·6
Construction, hand trades and repair	209,866,698	6·1	150,216,557	4·7
Total for Canada	**3,433,276,053**	**100·0**	**3,210,709,288**	**100·0**

10.—Capital Employed in the Manufacturing Industries of Canada by Provinces and by Groups of Industries, 1921.

(A) By Provinces.

Distribution.	Number of establishments.	Land, buildings and fixtures.	Machinery and tools.	Materials on hand, stocks in process and supplies on hand.	Cash, trading and operating accounts and bills receivable.	Total.
	No.	$	$	$	$	$
Canada	**41,323**	**1,052,213,773**	**840,111,646**	**690,900,521**	**558,640,111**	**3,210,709,288**
Prince Edward Island	446	625,315	825,646	457,344	334,612	2,452,826
Nova Scotia	2,196	47,025,027	27,396,702	16,518,566	14,280,950	107,490,242
New Brunswick	1,326	37,528,838	26,053,093	26,568,768	12,013,875	103,367,891
Quebec	10,762	337,596,055	245,176,765	208,925,312	167,847,990	973,722,564
Ontario	18,093	485,910,115	423,228,124	371,870,822	303,954,934	1,620,681,181
Manitoba	1,965	31,179,665	28,754,301	18,361,358	18,361,811	100,441,542
Saskatchewan	2,027	10,141,081	10,648,073	5,109,053	4,710,990	34,794,506
Alberta	2,024	18,529,361	15,706,893	8,018,654	9,716,471	55,538,526
British Columbia	2,470	82,981,873	61,906,638	34,980,730	27,217,184	210,798,811
Yukon	14	696,443	415,411	89,914	201,294	1,421,199

(B) By Industrial Groups.

Vegetable products	3,958	122,357,241	78,639,192	91,733,054	67,343,405	362,665,357
Animal products	5,051	56,455,522	32,902,430	63,591,106	47,748,469	200,697,527
Textile products	4,046	55,964,050	57,926,952	73,772,840	65,488,510	264,118,883
Wood and paper	7,152	269,693,940	202,893,117	188,346,020	103,621,022	775,207,859
Iron and its products	1,138	154,414,781	154,590,441	146,873,123	119,802,079	575,680,424
Non-ferrous metals	344	23,884,191	23,987,862	30,592,485	25,614,952	104,079,490
Non-metallic minerals	764	77,876,836	12,662,365	27,469,201	8,980,732	126,989,134
Chemicals and allied products	468	47,661,956	17,484,515	30,515,002	22,721,169	118,382,642
Miscellaneous industries	1,995	205,965,721	236,743,765	23,707,398	62,955,157	532,671,415
Construction, hand trades and repairs	16,407	37,939,535	22,281,007	14,300,292	34,364,616	150,216,557

4.—Employment.

The total number of persons engaged in the manufacturing industries of Canada in 1921 was 517,141, as compared with 685,349 in 1920 and 682,434 in 1919. The employees consisted in 1921 of 76,777 persons on salaries and 440,364 wage earners. This latter figure, representing the average number of wage earners employed during the entire year, was ascertained by dividing twelve into the sum of the numbers on the payrolls on the 15th of each month.

A comparison of the average number of wage earners is an excellent measure of industrial activity. In Table **11** index numbers, based on data for 1915 equalling 100, are given to show the variation in employment. The index numbers of the volume of products are also inserted for comparative purposes. Aside from the considerable drop in 1921, the indices of employment indicate less violent change than those of production. For example, the index of employment increased from 150.2 in 1919 to 150.6 in 1920, while the index of production increased from 118 to 133. In 1921 the number of wage earners was 11.3 p.c. greater than in 1915 and production was 27 p.c. greater.

11.—Wage-earners in Manufacturing Industries, 1915 to 1921.

Years	Average Number of Wage Earners.[1]	Index Numbers.	
		Average Number of Wage Earners.	Volume of Manufactured Products.
1915	395,681	100·0	100
1917	601,305	152·0	142
1918	603,116	152·4	137
1919	594,118	150·2	118
1920	596,052	150·6	133
1921	440,364	111·3	127

[1] Exclusive of outside piece workers.

Employment by Provinces.—The concentration of manufacturing establishments in the provinces of Ontario and Quebec is shown by the fact that in 1921 the employees in the former province were 50 p.c. and in the latter 30.8 p.c. of the total. The proportions in the other provinces were 5·5 p.c. in British Columbia, 4 p.c. in Manitoba and 3.3 p.c. in Nova Scotia, the employment in the remaining provinces ranging from .21 p.c. to slightly more than 3 p.c. The striking feature of the six year interval between 1915 and 1921 was the extraordinary industrial growth of the prairie provinces and the steady development in the industrialized area of Ontario and Quebec. Employees in the factories of Saskatchewan and Alberta increased 107.6 p.c. and 51.4 p.c. respectively. The ratio of increase in Quebec was 19.2 p.c., and in Ontario 16.2 p.c. The average employment throughout Canada of workers of all ranks, exclusive of outside piece workers, was 448,364 in 1915, (497,170 on Dec. 15, 1915), which increased by 15.3 p.c. to 517,141 in 1921.

Sex Distribution of Employees.—In Ontario the ratio of the number of female wage earners employed in factories to the number of males during 1915 was 22·7 p.c., while in 1921 the ratio increased to 23·2 p.c. In Quebec the ratio was 27·1 p.c. in 1915 and 32·5 p.c. in 1921. The employment of women was, however, largely confined to a few trades, the expansion of the textile and clothing industries being a chief cause of the increase in female employment. In addition the preparation of food, book-binding and other light factory work were specifically regarded as women's trades. From 1915 to 1921, the male wage earners of Canada increased

8·9 p.c., while the female workers increased nearly 22 p.c. The more rapid increase of female employment was largely due to the special conditions resulting from the war.

Age Distribution.—In the wage data collected on the census of industry schedules a division was made between the employees under 16 years and those over that age. In 1918, 18,717 children under 16 were drawing wages, of whom 7,226 were girls. Wage earners under 16 years of age declined to 15,155 in 1919 and to 12,011 in 1920. The percentage of children to the total number of wage earners classified in this connection, as of December 15 or nearest representative date, was 2·1 in 1915, advancing to slightly over 3 p.c. in 1917 and 1918, and declining to 2·9 p.c. and 2·4 p.c. respectively in 1919 and 1920.

Fluctuation of Employment.—The number of wage earners employed in Canadian manufactures in January, 1920, was 551,578. Steady increases were registered until July, when 638,133 were employed. During the remainder of the year declines were the order of the day, the recession in December as compared with the previous month being from 571,646 to 519,777. The month of July was from the viewpoint of employment the turning point of the post-war boom.

Earnings of Employees.—The total amount paid to the employees in industrial plants during 1921 was $581·4 million as compared with $285·9 million in 1915. The wage payments in 1921 were $441·3 million, while the salaried employees received a remuneration of $140·1 million. The average yearly wage of the wage earner was $1,002·06 in 1921 as compared with $570.11 in 1915, an increase of 75·8 p.c. in average earnings. When the index number representing the average yearly wages with 1915 as a base is divided by the index number of the cost of living with the same base, it is seen that real wages advanced by about 10 p.c. in the six year interval. The details of the computation are given in Table **12.**

12.—Average Yearly Earnings and Real Wages of Wage Earners in Manufacturing Industries, 1915-1921.

Years.	Amount of Wages paid.	Average Number of Wage Earners.	Average Yearly Earnings.	Index Numbers.		
				Average Yearly Earnings.	Retail Prices.	Real value of Average Yearly Earnings.
	$		$ cts.			
1915	225,580,998	395,681	570·11	100·0	100·0	100·0
1917	455,199,823	601,305	757·20	132·8	132·9	99·9
1918	522,287,570	603,116	865·96	151·9	151·6	100·2
1919	558,580,707	594,118	941·83	165·2	163·2	101·2
1920	657,701,361	596,052	1,103·43	193·5	181·7	106·5
1921	441,291,494	440,364	1,002·06	175·8	159·8	110·0

Classification by Wages.—Information collected at this census regarding weekly wages of employees in manufacturing industries, is tabulated by groups of industries and by wage groups in the wages subsection of the Labour, Wages and Prices section of the Year Book, to which the student of industrial wages is referred.

Summary statistics of the number of salaried and wage-earning employees of manufacturing industries, with the amount of salaries and wages paid in 1920 and 1921, are given by provinces in Table **13.**

13.—Male and Female Employees on Salaries and Wages, by Provinces, 1920 and 1921.

Provinces.	Employees on Salaries.		Salaries.	Employees on Wages.		Wages.
	Males.	Females.		Males.	Females.	
1920.	No.	No.	$	No.	No.	$
Prince Edward Island	187	26	166,897	1,103	327	966,344
Nova Scotia	1,918	561	3,702,046	23,054	2,866	27,381,724
New Brunswick	1,534	378	3,012,436	16,075	3,143	18,281,989
Quebec	19,965	4,360	44,582,393	138,136	42,970	179,655,354
Ontario	35,766	11,629	83,544,934	230,662	55,935	324,658,628
Manitoba	3,472	784	7,662,168	21,394	3,114	31,407,110
Saskatchewan	1,276	220	2,435,758	8,440	540	11,984,484
Alberta	1,977	386	4,042,323	10,969	1,086	14,941,806
British Columbia	4,107	737	9,186,548	33,618	2,574	48,337,252
Yukon	12	2	18,275	43	3	86,670
Canada	**70,214**	**19,083**	**158,353,778**	**483,494**	**112,558**	**657,701,361**
1921.						
Prince Edward Island	155	11	127,461	719	213	524,159
Nova Scotia	1,420	364	2,843,127	13,351	2,071	13,820,793
New Brunswick	1,272	289	2,540,531	9,702	2,478	9,275,133
Quebec	16,709	3,607	39,023,881	105,201	34,181	125,426,562
Ontario	33,123	9,672	76,921,367	174,911	40,639	227,016,719
Manitoba	2,945	675	6,628,005	14,609	2,503	20,364,328
Saskatchewan	969	151	1,865,979	5,750	365	6,976,307
Alberta	1,489	290	3,168,767	6,942	1,603	8,991,762
British Columbia	3,165	460	6,978,199	22,882	2,193	28,797,329
Yukon	11	–	13,574	48	3	98,402
Canada	**61,258**	**15,519**	**149,110,891**	**354,115**	**86,249**	**441,291,494**

8.—Power and Fuel.

Power.—The statistics of the use of mechanical power in manufacturing establishments bring into relief another phase of industrial development in Canada. The total h.p. used has been computed for the years 1917 to 1921. The power produced by steam and internal combustion engines, by water wheels and motors and other unspecified units, as well as the electric power purchased from outside concerns, were included in the total. The aggregate used in 1917 was 3,592,940 h.p. and in 1918 declined to 3,518,004 h.p. During the two following years increases took place to 3,544,607 h.p. in 1919 and 3,698,479 h.p. in 1920. On account of the recession in manufacturing activity during 1921, the power used declined to 3,492,646 h.p. The power developed by electric motors in 1921 was 755,982 h.p., as compared with 813,273 h.p. in the previous year.

The total h.p. used in the factories of Ontario in 1921 was 1,477,776 and Quebec followed with 1,167,460 h.p. Third came British Columbia, with a horsepower of 376,196. The total electrical power used in Ontario was 367,113 h.p., and in Quebec 246,719 h.p.

Aside from the miscellaneous group, which includes the central electric stations, the wood and paper group used most power in 1921. The utilization amounted to 835,707 h.p., which may be compared with the 171,190 h.p. used by the vegetable products group, including the flour milling industry. The mills and factories engaged in the manufacture of iron and steel products held fourth place, using 130,738 h.p.

14.—Power used in the Manufacturing Industries of Canada by Provinces, and Groups of Industries, 1921.

Provinces and Groups.	Steam Engines	Gas Engines	Oil Engines	Gasoline Engines	Water Wheels and Motors.	Electric Motors.	Other Power.	Total.[1]
PROVINCES.	h.p.	h.p.	h.p.	h.p.	h.p.	h.p.	h.p.	h.p.
Prince Edward Island	1,367	12	1,032	637	1,832	157	44	5,029
Nova Scotia	45,048	1,130	2,051	900	24,663	15,333	1,207	85,221
New Brunswick	45,202	482	1,305	1,309	19,394	31,860	291	89,223
Quebec	141,993	1,126	1,425	2,927	851,100	246,719	4,410	1,167,460
Ontario	213,711	12,939	1,293	3,518	983,181	367,113	18,392	1,477,776
Manitoba	20,801	92	1,334	418	82,747	18,506	457	118,186
Saskatchewan	50,906	53	7,392	450	2	6,058	75	62,917
Alberta	56,838	1,137	1,819	537	32,444	11,391	26	100,395
British Columbia	99,934	272	2,505	1,359	229,935	58,840	2,964	376,196
Yukon	240	–	–	–	10,000	5	–	10,243
Total	**676,040**	**17,243**	**20,156**	**12,055**	**2,235,298**	**755,982**	**27,866**	**3,492,646**
GROUPS.								
Vegetable products	43,741	2,018	828	3,046	39,181	119,034	3,020	171,190
Animal products	19,878	444	142	3,234	1,386	39,007	793	51,882
Textiles	16,092	717	36	139	22,495	67,285	936	85,272
Wood and paper	274,035	5,774	1,568	4,058	336,503	294,910	17,162	835,707
Iron and steel	26,315	7,481	238	426	3,332	135,189	2,870	130,738
Non-ferrous metals	2,159	8	24	–	2,525	23,383	1,381	21,686
Non-metallic minerals	11,238	814	1,389	257	8	19,374	1,521	28,143
Chemicals	5,962	25	6	858	3,511	38,299	106	36,000
Miscellaneous	272,458	3	15,925	3	1,826,357	10,298	77	2,121,688
Hand trades, construction and repairs	4,162	9	–	34	–	9,203	–	10,340

[1] For the purpose of eliminating an obvious duplication where electric motors are run by power generated by the reporting establishments, a deduction of one-third of the horsepower furnished by electric motors is made in computing the total.

Fuel.—The fuel used in industrial establishments in 1921 included 4,129,265 tons of bituminous coal, valued at $35,001,349, constituting 67·3 p.c. of the total fuel cost. The other chief fuels in order of value were fuel oil, comprising 10·5 p.c.; anthracite coal 5·6 p.c. and coke 4·8 p.c. In 1921 the foreign bituminous used amounted to 2,867,355 tons, as compared with 1,261,910 tons of domestic production.

Out of a fuel account of nearly $52,000,000, Ontario expended $24,100,000 or 46 p.c. of the total. The manufacturing concerns of Quebec expended $15,500,000 and those of Nova Scotia $3,500,000. The fuel account of Ontario included 1,984,715 tons of foreign bituminous coal, valued at $16,990,643. Quebec used 835,305 tons of foreign soft coal worth $8,748,283.

The groups of industry in which fuel was most extensively used in 1921 were wood and paper, $14,870,515; iron and steel, $9.621,669; vegetable products, $7,455,321 and non-metallic minerals $6,183,707. Fuel is used quite generally throughout the industrial field for the generation of power by means of internal combustion and steam engines. The principal industries where fuel is used as a material that enters into the actual composition of the product, are the manufactures of coke and gas. The most important industries where heat is applied directly to materials to transform them or to facilitate their manipulation are foundries and machine shops, blast furnaces and steel mills, non-ferrous metal smelting, brick and tile, lime and cement, petroleum refining and the glass industry.

15.—Fuel used in the Manufacturing Industries of Canada, by Provinces, 1921.

Provinces and Groups.	Bituminous Coal.		Anthracite Coal.	Lignite Coal.	Coke.	Gasoline.	Oil.	Other.
	Tons.	$	$	$	$	$	$	$
PROVINCES.								
Prince Edward Island	5,061	52,667	9,831	2,566	510	180,998	912	15,838
Nova Scotia	427,594	2,105,209	92,433	7,981	239,702	37,851	974,930	53,317
New Brunswick	237,163	1,957,814	53,101	2,558	13,311	14,058	24,131	94,307
Quebec	1,033,732	10,910,430	1,340,006	84,593	537,991	60,615	1,458,876	1,019,493
Ontario	2,031,996	17,403,284	1,124,957	63,230	1,478,475	296,961	1,924,294	1,763,858
Manitoba	64,726	587,459	122,024	201,418	123,562	39,840	56,199	128,132
Saskatchewan	49,866	418,155	75,189	579,738	13,029	649	69,611	466,715
Alberta	120,222	387,799	59,811	375,484	26,089	41,902	507	53,702
British Columbia	158,640	1,174,651	53,005	10,103	82,846	59,035	956,736	415,903
Yukon	265	3,881	–	–	–	–	–	7,316
Total	**4,129,265**	**35,001,349**	**2,930,357**	**1,327,671**	**2,515,515**	**739,328**	**5,466,196**	**4,018,581**
GROUPS.								
Vegetable products	559,279	4,634,807	893,636	238,244	346,538	106,761	572,532	662,753
Animal products	302,168	2,354,006	260,330	157,636	36,105	156,892	71,635	724,386
Textiles	282,265	2,765,296	235,097	46,021	51,755	16,241	11,912	58,854
Wood and paper	1,295,814	12,467,581	763,121	33,412	21,537	132,554	405,842	1,046,468
Iron and steel	830,006	5,835,331	338,315	50,990	1,400,717	122,390	1,306,487	567,439
Non-ferrous metals	73,913	642,713	92,556	5,516	82,678	44,049	139,962	106,496
Non-metallic minerals	255,894	2,307,018	41,320	4,612	437,724	49,527	2,699,194	644,312
Chemicals	189,568	1,642,952	98,304	27,584	115,698	20,034	62,854	63,463
Miscellaneous	314,164	2,102,977	193,023	762,441	4,648	81,493	147,382	126,711
Hand trades, construction and repair	26,194	248,663	14,605	1,215	18,115	9,387	48,396	17,699

6.—Localization of Manufacturing Industries.

The prosperity of most of the cities and large towns of Canada is intimately connected with their manufacturing industries. Statistics of the manufacturing industries in all cities, towns and villages of over 1,000 population throughout the country, as ascertained at the census of 1921, are given in Table **16.** As a consequence of the gathering momentum of the post-war boom, the figures for 1920 are in many cases strikingly increased from those of 1919, as in the cases of Windsor and Walkerville. Cities having a gross manufacturing production of over $100,000,000 each in 1920, in the order of the value of their products, were Montreal, Toronto, Hamilton and Winnipeg. Vancouver and Ottawa, the only cities in the $50,000,000 to $100,000,000 class in 1920, produced manufactures to the gross value of $98,689,520 and $57,708,929 respectively. Other important manufacturing cities producing in 1920 goods to a gross value of between $30,000,000 and $50,000,000 were in the order of value produced, London, Quebec, Kitchener, Brantford, Sault Ste. Marie, Peterborough, Sydney, Calgary, Oshawa, Sarnia, Edmonton and Walkerville. For details the reader is referred to Table **16.**

16.—Statistics of Manufactures by Cities, Towns and Villages of 1,000 population and over, 1920.

Cities and Towns.	Establishments.	Capital.	Employees.	Salaries and wages.	Cost of materials.	Value of products.
	No.	$	No.	$	$	$
P. E. Island—						
Charlottetown	76	1,604,950	642	611,356	1,812,637	2,998,810
Souris	15	66,828	51	19,601	30,799	75,555
Summerside	33	350,052	177	121,547	198,218	547,825
Nova Scotia—						
Amherst	71	11,435,925	2,267	2,636,217	6,458,422	10,839,717
Antigonish	23	206,903	79	57,324	115,427	213,837
Bridgetown	22	359,757	129	90,003	190,244	400,247
Bridgewater	45	2,790,221	285	226,887	455,931	871,544
Canso	14	449,428	166	117,650	336,599	568,034
Dartmouth	42	9,008,043	1,581	2,015,674	3,012,630	6,074,577
Digby	24	278,431	120	118,942	269,215	420,894
Glace Bay	37	339,677	147	138,380	166,203	459,184
Halifax	315	25,484,900	7,171	8,548,917	8,910,997	25,593,326
Inverness	5	3,010	21	2,937	11,271	18,059
Kentville	23	255,834	186	261,419	174,903	486,934
Liverpool	31	3,598,718	400	351,671	454,575	1,142,905
Louisbourg	9	31,837	18	10,108	21,399	48,698
Lunenburg	40	651,255	296	250,809	250,738	667,908
New Glasgow	79	13,191,690	2,610	3,020,909	12,590,810	18,730,534
North Sydney	25	105,497	129	113,345	112,551	316,042
Oxford	11	762,972	247	212,994	581,388	1,013,035
Parrsboro	17	72,948	83	67,294	137,927	288,910
Pictou	29	916,100	447	356,135	644,443	1,499,329
Shelburne	20	408,459	183	165,381	273,711	622,185
Springhill	10	28,575	17	13,623	29,734	53,385
Stellarton	12	463,192	217	318,710	322,994	758,305
Sydney	122	32,246,019	2,929	5,038,746	20,354,934	37,567,205
Sydney Mines	15	1,761,754	314	341,197	3,218,938	4,492,856
Trenton	4	881,349	321	366,516	670,125	1,344,653
Truro	64	3,249,871	1,080	1,018,071	2,460,759	5,027,798
Westville	7	83,737	39	32,516	24,870	93,248
Windsor	28	1,939,696	357	269,893	846,731	1,448,689
Wolfville	14	124,275	66	62,517	177,556	276,309
Yarmouth	68	3,885,034	979	801,563	3,286,805	5,392,646
New Brunswick—						
Bathurst	29	9,104,582	896	947,925	1,992,467	4,980,990
Campbellton	27	5,295,234	840	969,003	1,763,442	3,373,311
Chatham	24	2,431,379	461	362,028	1,067,875	1,646,526
Dalhousie	11	2,027,611	269	265,338	697,311	1,149,536
Edmunston	14	2,353,448	563	875,492	1,766,023	5,207,702
Fredericton	65	3,149,344	893	855,751	2,129,703	3,801,683
Grand Falls	18	449,070	155	137,625	157,420	347,315
Marysville	3	1,816,550	574	527,962	1,123,633	2,171,997
Milltown	4	2,337,240	696	534,815	940,231	2,203,995
Moncton	90	9,589,975	3,061	3,727,278	3,862,465	8,888,553
Newcastle	25	4,339,131	439	361,196	1,158,861	2,172,950
Richibucto	7	99,700	34	7,000	31,216	48,579
Sackville	21	1,360,826	400	303,374	554,722	1,066,962
Shediac	13	139,885	52	34,145	113,524	197,570
St. Andrews	17	75,271	35	22,759	71,649	119,014
St. George	10	558,933	146	143,262	165,405	513,162
St. John	302	15,814,282	4,630	4,693,198	8,621,966	17,895,292
St. Stephen	40	4,341,459	952	856,786	3,973,066	6,250,947
Sussex	40	1,801,764	344	291,714	837,638	1,635,754
Woodstock	36	584,736	179	177,147	331,715	637,444
Quebec—						
Actonvale	20	131,408	57	37,268	160,642	245,300
Arthabaska	12	167,594	78	67,079	134,035	259,636
Asbestos	11	66,289	21	16,143	24,066	56,938
Aylmer	3	4,090	3	1,540	2,300	7,700
Bagotville	13	118,250	25	14,391	37,549	65,731
Baie St. Paul	21	164,512	26	18,052	59,052	100,710
Beauceville	10	127,130	28	26,872	33,234	110,215
Beauharnois	21	2,577,897	489	600,247	1,506,327	3,235,788
Bedford	20	374,222	72	53,104	89,994	200,895
Beloeil	20	1,411,453	277	426,682	171,934	2,470,682
Berthier	10	24,552	13	6,040	48,928	65,889
Bienville	4	13,682	6	2,519	5,326	16,651
Black Lake	12	56,382	15	10,255	35,460	61,242
Bromptonville	13	666,226	306	325,774	1,421,256	2,804,113

16.—Statistics of Manufactures by Cities, Towns and Villages of 1,000 population and over, 1920—continued.

Cities and Towns.	Establishments.	Capital.	Employees.	Salaries and wages.	Cost of materials.	Value of products.
	No.	$	No.	$	$	$
Quebec—con.						
Buckingham	30	2,807,384	429	513,332	1,005,593	3,551,513
Chambly	8	40,394	21	9,494	36,666	57,439
Chicoutimi	41	8,802,297	939	1,022,784	1,518,660	7,182,543
Coaticook	45	2,002,455	707	551,289	1,871,542	3,053,136
Cookshire	21	755,151	151	108,250	266,345	577,646
Cowansville	16	691,557	139	128,041	217,238	415,473
Danville	22	356,319	87	75,404	237,527	470,621
Deschaillons	11	35,225	111	24,353	22,501	85,996
Disraeli	20	783,027	117	118,116	175,976	427,438
Dorval	3	25,907	4	4,716	4,282	17,953
Drummondville	31	1,372,587	355	272,893	1,132,322	1,910,049
Farnham	29	312,610	112	87,325	220,281	428,724
Fraserville	31	1,911,334	499	657,209	530,742	1,628,592
Granby	50	4,884,324	1,982	1,637,217	2,999,710	6,536,707
Grande Baie	8	28,924	12	11,471	38,385	55,145
Grand'Mère	34	53,795,328	2,717	3,457,424	3,333,960	16,432,589
Hull	70	17,314,736	3,023	3,010,503	7,681,380	16,623,648
Huntingdon	30	157,585	115	85,305	118,640	264,929
Iberville	21	713,351	241	178,584	472,198	871,286
Joliette	57	1,968,782	1,106	925,652	2,076,000	3,688,659
Jonquiere	21	245,986	39	29,472	36,496	130,857
Lachute	22	2,949,880	364	325,436	1,408,642	2,686,744
Lachine	64	14,122,645	2,329	3,289,830	4,054,757	15,682,251
Laprairie	11	70,415	35	32,010	55,233	110,201
L'Assomption	9	19,725	11	3,741	69,510	78,423
La Tuque	15	9,407,879	1,188	1,602,675	2,003,338	6,391,566
Laurentides	19	165,012	26	17,433	45,483	85,811
Lauzon	7	4,523,992	922	1,122,440	445,888	2,960,939
Lennoxville	3	138,726	47	66,160	155,215	312,615
Levis	34	1,062,115	341	342,143	413,612	926,894
Longueuil	16	78,238	42	44,468	68,315	147,825
Lorette	10	21,870	18	15,509	37,658	66,965
Louiseville	11	811,776	223	195,061	498,025	859,324
Magog	29	5,843,871	1,156	756,617	3,948,794	8,305,927
Malbaie	6	67,350	27	13,270	74,649	157,829
Marieville	13	1,125,636	330	273,768	1,003,123	1,523,951
Maisonneuve	15	15,388,954	2,821	3,532,552	5,455,681	14,091,034
Megantic	17	527,798	144	157,147	339,942	776,562
Mont-Joli	9	493,258	82	79,457	206,518	405,180
Mont-Laurier	9	190,955	43	48,875	271,765	399,112
Montmagny	37	2,170,970	331	484,507	752,989	1,693,457
Montreal	2,823	471,487,579	113,078	131,111,321	309,308,243	593,881,752
Nicolet	26	308,953	132	99,772	148,737	303,441
Outremont	3	33,171	26	33,724	63,728	129,501
Pierreville	19	63,604	16	43,740	74,187	58,780
Plessisville	22	532,798	159	128,168	223,187	458,196
Point-aux-Trembles	6	312,042	110	113,076	137,994	345,060
Pointe Claire	9	95,288	31	26,601	25,863	92,335
Pointe-Gatineau	4	9,680	5	2,786	2,796	10,580
Quebec	443	42,021,102	11,422	9,143,586	25,229,092	45,121,279
Richmond	19	285,752	95	73,957	63,888	212,512
Rimouski	25	1,785,575	189	327,669	636,604	1,735,362
Roberval	28	366,058	103	89,630	213,025	444,377
Shawinigan Falls	41	18,963,649	2,529	2,993,504	5,656,628	14,980,975
Sherbrooke	134	22,212,093	5,394	5,569,655	11,068,153	22,518,034
Sorel	41	1,562,168	1,028	843,715	522,790	1,713,171
Ste. Agathe des Monts	20	437,500	187	149,604	263,413	561,075
Ste. Anne de Beaupre	6	9,236	6	5,005	13,412	29,944
Ste. Anne de Bellevue	13	80,660	31	25,385	34,362	101,774
St. Eustache	16	66,064	22	11,925	104,031	140,437
St. Gabriel de Brandon	15	126,150	104	104,491	210,210	432,551
St. George	12	103,652	22	16,399	126,766	154,060
St. Hyacinthe	80	5,706,374	2,225	1,459,088	4,306,151	8,546,981
St. Jean	53	28,539,413	5,526	5,770,388	11,482,800	21,012,707
St. Jerome	37	3,653,176	1,487	1,184,799	2,691,994	6,078,264
St. Joseph (Beauce)	15	117,585	31	23,147	113,816	163,280
St. Lambert	11	301,878	111	107,462	129,349	294,567
St. Laurent	12	1,114,620	232	251,034	512,710	806,091
St. Raymond	23	2,292,402	230	250,767	553,799	1,439,289
St. Remi	16	652,933	132	95,060	826,302	1,029,057
Ste. Rose	10	49,870	20	13,610	41,703	64,732
Ste. Thérèse	17	1,104,341	305	265,609	697,244	1,260,432
Ste. Tite	23	313,144	160	92,151	322,914	521,875

16.—Statistics of Manufactures by Cities, Towns and Villages of 1,000 population and over, 1920—continued.

Cities and Towns.	Establishments.	Capital.	Employees.	Salaries and wages.	Cost of materials.	Value of products.
	No.	$	No.	$	$	$
Quebec—concluded.						
Terrebonne	18	1,507,424	420	336,498	572,866	1,152,488
Thetford Mines	40	436,738	149	154,440	246,811	542,216
Three Rivers	98	29,769,804	6,099	6,266,320	12,980,697	27,085,510
Valleyfield	46	9,620,671	2,338	1,909,141	5,979,079	14,536,231
Verdun	6	794,043	154	201,702	775,191	1,151,884
Victoriaville	38	2,907,089	450	415,239	840,352	2,162,432
Waterloo	22	385,965	130	104,648	175,608	372,990
Westmount	13	1,480,716	359	467,345	938,045	1,811,898
Windsor	16	3,638,969	554	766,137	1,058,585	2,912,617
Ontario—						
Acton	18	292,929	130	91,578	233,003	427,466
Alexandria	32	583,285	477	473,732	792,056	1,574,748
Alliston	31	250,929	100	81,829	428,212	594,542
Almonte	29	3,493,610	1,088	1,128,636	2,222,781	4,905,119
Amherstburg	18	6,539,801	619	1,067,197	545,643	2,074,627
Arnprior	38	4,601,611	543	514,561	579,203	1,476,132
Arthur	24	214,817	192	101,342	595,717	837,338
Aurora	26	987,398	311	306,235	659,987	1,312,147
Aylmer	26	1,244,742	254	212,661	1,283,348	2,168,281
Barrie	67	795,552	254	220,921	914,478	1,492,775
Beamsville	18	227,459	114	93,610	265,350	451,894
Beaverton	12	70,440	24	14,722	76,968	117,062
Belleville	101	2,949,933	866	853,305	1,641,305	3,404,154
Blenheim	19	363,146	77	361,567	469,084	614,320
Blind River	9	56,679	104	147,924	315,449	787,487
Bobcaygeon	17	69,837	23	11,400	57,925	84,336
Bowmanville	37	3,251,041	532	487,178	1,712,230	2,870,156
Braebridge	27	1,237,722	202	189,148	458,161	946,059
Brampton	45	2,470,914	827	949,397	2,067,285	3,905,278
Brantford	218	54,480,761	9,003	11,162,862	22,077,879	41,317,823
Brockville	81	4,829,936	1,263	1,300,275	4,766,834	7,522,113
Bridgeburg	26	2,566,077	574	968,057	1,843,073	3,187,579
Brighton	24	541,165	123	110,631	325,270	531,409
Burlington	25	580,471	162	134,454	560,262	1,001,646
Caledonia	23	315,899	79	70,317	854,406	1,060,928
Campbellford	39	1,068,978	424	388,770	955,794	1,706,731
Cardinal	13	3,011,840	460	515,733	2,274,654	3,285,012
Carleton Place	38	2,695,093	891	875,469	1,649,611	3,496,029
Chatham	120	10,804,398	2,302	2,624,110	11,558,285	17,260,430
Chesley	23	920,910	291	281,411	916,796	1,527,832
Clinton	32	789,735	223	176,176	617,281	995,219
Cobalt	30	13,626,578	236	289,931	177,765	989,004
Cobourg	45	2,218,558	444	431,159	1,241,016	2,506,826
Cochrane	15	112,843	143	245,075	161,450	477,096
Collingwood	55	6,105,642	889	976,193	1,427,255	3,193,063
Copper Cliff	9	230,016	19	13,687	21,268	60,296
Cornwall	79	11,270,622	2,148	2,032,053	4,874,925	10,173,519
Deseronto	23	847,714	260	190,003	591,604	1,722,256
Dresden	28	573,559	191	158,665	742,267	1,175,548
Dundas	39	5,947,845	885	1,200,485	1,765,935	3,744,391
Dunnville	48	2,883,334	734	622,043	1,428,303	2,539,715
Durham	23	638,978	197	183,725	528,241	774,959
Eastview	5	59,733	10	6,807	92,483	119,798
Eganville	19	197,084	40	34,204	251,863	324,740
Elmira	35	1,576,636	547	519,303	1,313,121	2,394,636
Elora	18	668,623	239	234,427	379,844	793,900
Essex	31	364,338	84	76,801	222,902	408,246
Exeter	30	275,543	107	73,991	406,854	588,164
Fenelon Falls	22	143,834	69	52,930	181,463	284,305
Fergus	28	1,313,134	324	320,040	1,172,713	1,943,724
Forest	25	376,272	166	136,294	452,698	740,872
Fort Erie	7	58,764	20	19,610	54,753	92,827
Fort Frances	25	6,998,911	716	1,194,749	2,931,047	8,434,294
Fort William	86	13,027,737	1,601	2,218,106	9,166,328	13,707,742
Galt	141	14,519,589	4,061	4,731,520	9,498,485	18,486,901
Gananoque	41	2,873,662	647	701,961	1,090,462	2,899,976
Georgetown	34	2,980,953	561	642,673	2,367,551	3,810,614
Goderich	47	1,989,246	417	382,732	5,789,417	7,264,367
Gravenhurst	18	571,230	143	132,934	177,195	494,202
Grimsby	33	948,824	303	285,712	860,672	1,439,584
Guelph	170	15,078,034	3,888	5,279,891	10,175,666	19,800,432
Hagersville	27	134,171	36	25,570	177,231	275,202

16.—Statistics of Manufactures by Cities, Towns and Villages of 1,000 population and over, 1920—continued.

Cities and Towns.	Establishments.	Capital.	Employees	Salaries and wages.	Cost of materials.	Value of products.
	No.	$	No.	$	$	$
Ontario—con.						
Haileybury	19	115,904	49	50,945	75,022	175,811
Hamilton	795	144,763,907	31,567	40,904,240	85,500,298	172,600,029
Hanover	35	2,165,596	627	558,476	737,036	1,965,860
Harriston	22	202,420	258	95,340	195,736	406,913
Havelock	15	62,125	25	10,010	60,154	90,193
Hawkesbury	32	5,770,168	901	1,286,017	4,033,410	8,351,068
Hespeler	28	5,214,570	1,107	1,141,095	2,436,942	5,260,946
Huntsville	23	738,815	355	419,317	469,731	1,179,396
Ingersoll	52	4,932,636	922	1,088,704	3,882,331	6,036,483
Iroquois	20	378,944	63	42,835	332,653	441,060
Keewatin	4	4,292,921	716	1,139,931	18,123,988	20,978,677
Kemptville	34	327,490	92	92,876	260,679	409,787
Kenora	26	2,423,085	273	370,336	2,295,762	3,014,253
Kincardine	37	1,008,371	353	328,676	826,457	1,536,971
Kingston	174	13,267,416	2,494	2,555,403	4,455,207	8,949,226
Kingsville	27	603,651	135	138,770	417,965	731,277
Kitchener	216	27,452,571	8,268	9,078,859	20,698,220	43,095,584
Lakefield	17	139,309	43	31,878	90,478	154,176
Leamington	39	1,605,134	457	449,515	1,318,359	2,674,494
Lindsay	83	4,331,413	864	738,129	1,598,621	3,217,098
Listowell	40	1,018,542	324	304,327	1,308,017	2,000,775
London	464	36,089,918	11,214	12,300,456	24,820,936	48,888,185
L'Orignal	7	192,453	42	36,652	90,782	186,117
Madoc	30	530,669	75	63,620	290,638	487,557
Markham	12	64,951	28	21,064	166,963	228,314
Mattawa	11	47,663	13	8,114	12,016	31,526
Meaford	34	1,533,643	476	424,227	1,515,461	2,688,218
Merriton	16	6,654,254	1,002	1,241,948	2,631,967	7,210,083
Midland	44	4,630,462	1,051	1,241,588	2,373,959	4,542,973
Milton	31	2,349,083	240	327,824	345,817	1,101,971
Mitchell	24	823,869	333	260,351	521,592	1,151,642
Mount Forest	32	769,010	127	119,608	702,018	1,020,654
Morrisburg	29	159,487	70	54,948	181,276	275,249
Napanee	48	888,960	259	239,080	708,893	1,294,902
New Hamburg	31	847,417	268	225,236	630,789	1,106,686
New Liskeard	25	423,832	196	227,177	303,983	642,035
Newmarket	27	1,873,069	582	657,837	711,634	2,396,957
New Toronto	11	18,518,194	3,361	4,066,541	15,796,405	23,128,912
Niagara	7	175,541	53	40,100	163,029	282,442
Niagara Falls	135	28,352,773	3,409	5,054,105	6,835,873	23,230,696
North Bay	58	9,365,794	1,408	2,271,108	2,038,301	5,448,704
Norwich	27	737,700	195	190,580	1,976,546	2,536,760
Oakville	35	1,408,155	282	320,598	1,004,704	1,797,896
Orangeville	28	705,264	133	101,808	434,943	677,203
Orillia	62	6,577,847	1,147	1,221,456	1,720,504	3,965,240
Oshawa	78	24,197,710	4,094	4,914,401	25,667,544	36,061,962
Ottawa	552	49,619,630	11,122	12,810,712	33,938,936	57,708,929
Owen Sound	101	5,169,849	1,875	1,678,975	2,816,446	6,149,898
Palmerston	21	222,366	67	48,730	481,765	664,323
Paris	43	4,620,006	1,276	1,056,636	3,850,839	6,705,409
Parkhill	19	169,547	46	39,450	148,337	248,239
Parry Sound	30	1,319,585	281	281,311	354,755	1,002,269
Pembroke	61	4,602,663	1,255	1,406,091	3,420,622	6,261,481
Penetanguishene	31	1,813,711	538	642,457	1,903,708	3,050,713
Perth	46	3,231,031	666	696,994	1,703,425	3,115,110
Peterboro	172	27,904,553	6,302	6,694,118	25,148,511	38,013,283
Petrolia	35	670,292	202	158,323	558,715	934,388
Picton	54	1,120,477	377	280,217	305,988	1,841,654
Port Arthur	59	11,819,002	1,765	2,239,297	2,288,532	7,457,816
Port Colborne	22	7,253,376	448	817,377	12,251,214	15,623,557
Port Dalhousie	5	1,189,364	412	390,804	815,938	1,566,824
Port Dover	15	410,280	135	101,675	544,046	795,311
Port Elgin	17	586,485	218	183,662	444,028	695,366
Port Hope	52	4,081,164	1,033	1,222,679	1,436,754	3,759,068
Port Perry	23	238,021	62	44,436	356,661	488,259
Prescott	29	783,834	218	211,961	441,987	903,321
Preston	61	5,453,135	1,682	1,985,627	4,252,510	7,649,374
Rainy River	12	55,329	97	160,091	106,788	288,897
Renfrew	59	4,321,565	1,824	1,038,836	3,004,066	5,730,875
Ridgetown	35	367,332	135	103,444	343,787	555,989
Rockland	13	714,748	558	377,425	1,128,575	2,156,586
Sarnia	89	25,500,268	3,239	4,298,163	18,620,147	33,222,301
Sandwich	14	198,445	193	320,551	434,768	1,555,581

16.—Statistics of Manufactures by Cities, Towns and Villages of 1,000 population and over, 1920—continued.

Cities and Towns.	Establishments.	Capital.	Employees.	Salaries and wages.	Cost of materials.	Value of products.
	No.	$	No.	$	$	$
Ontario—concluded.						
Sault Ste. Marie	125	50,222,886	3,488	6,046,658	20,697,880	38,274,952
Seaforth	33	1,322,326	493	312,503	702,741	1,448,768
Shelburne	18	103,820	41	30,590	360,434	457,569
Simcoe	59	2,727,293	703	568,251	2,658,409	4,071,640
Smiths Falls	54	4,379,802	755	865,281	1,241,550	2,612,538
Southampton	12	742,119	247	221,293	395,874	824,162
Stratford	137	8,978,221	3,931	4,546,491	8,255,640	15,215,725
Strathroy	41	1,529,159	340	283,127	789,211	1,435,030
Stouffville	15	147,093	36	34,756	53,799	128,117
Sturgeon Falls	21	5,309,840	627	1,005,547	1,287,849	3,510,496
Sudbury	63	2,511,004	474	649,593	949,717	2,397,085
St. Catharines	179	18,326,454	4,668	5,872,698	9,552,572	20,778,763
St. Thomas	123	5,021,667	2,671	4,007,586	7,072,905	12,890,978
St. Marys	43	4,674,658	739	764,084	1,424,668	3,789,039
Tavistock	28	627,942	164	136,987	1,351,212	1,670,376
Thessalon	21	1,898,578	181	257,837	690,083	1,479,279
Thorold	27	17,238,033	2,326	3,686,158	9,172,724	19,272,885
Tilbury	20	439,847	123	190,744	400,267	696,312
Tilsonburg	47	1,865,977	495	434,415	2,827,644	3,889,237
Toronto	3,383	453,261,134	106,630	132,917,237	314,099,886	588,969,742
Trenton	47	3,766,273	647	621,269	1,140,645	2,130,478
Tweed	29	299,709	99	90,266	479,864	647,022
Vankleek Hill	22	159,414	73	40,792	174,311	267,187
Victoria Harbour	7	1,477,277	194	225,929	708,760	1,103,631
Walkerton	41	1,277,099	347	305,380	1,187,632	1,917,846
Walkerville	57	25,781,673	3,822	5,693,173	18,868,993	31,808,303
Wallaceburg	38	2,046,002	965	1,030,173	1,143,425	4,398,246
Waterford	21	587,243	138	91,636	482,324	840,245
Waterloo	62	6,024,175	1,074	1,183,143	2,733,248	5,203,552
Watford	22	346,437	114	85,323	385,303	625,958
Welland	89	22,953,800	3,632	4,641,319	15,096,865	26,285,060
Weston	28	7,754,118	877	996,053	1,998,739	4,021,010
Whitby	24	673,336	208	187,783	224,077	631,954
Wiarton	27	458,896	108	86,275	259,088	462,486
Winchester	25	295,795	124	110,538	302,983	512,801
Windsor	204	17,020,228	3,918	5,853,858	15,098,575	28,164,856
Wingham	42	980,558	361	335,299	733,726	1,583,204
Woodstock	120	7,738,472	2,130	2,004,192	6,846,661	9,875,916
Manitoba—						
Brandon	98	4,493,658	879	1,163,909	4,353,236	6,962,165
Carman	21	129,816	32	30,295	47,541	117,472
Dauphin	40	549,798	246	314,852	543,252	1,034,026
Minnedosa	19	69,219	64	75,798	64,032	171,539
Morden	16	73,401	26	18,268	135,597	187,734
Neepawa	15	295,935	69	91,921	220,893	369,016
Portage la Prairie	36	1,066,831	330	390,135	3,337,655	4,147,373
Selkirk	10	1,264,044	399	512,055	641,240	1,565,769
Souris	14	682,400	118	164,328	808,507	1,130,270
St. Boniface	31	4,771,824	830	1,036,764	12,664,205	15,645,051
Stonewall	7	30,407	35	21,409	18,169	49,983
The Pas	8	1,653,654	291	418,323	621,104	1,195,071
Transcona	3	342,582	2,047	2,992,536	2,422,654	4,798,405
Virden	13	64,299	30	31,349	55,467	108,558
Winnipeg	911	100,371,889	23,729	33,573,858	71,414,428	135,721,684
Saskatchewan—						
Battleford	15	122,771	115	182,561	172,496	386,848
Biggar	18	111,879	119	189,398	131,821	353,717
Canora	13	139,463	25	28,701	56,074	113,564
Estevan	23	681,227	140	158,074	230,043	497,187
Humboldt	26	307,537	156	227,115	316,124	609,209
Indian Head	23	122,712	47	50,747	82,156	203,185
Kamsack	17	123,304	132	212,277	116,361	393,968
Maple Creek	17	163,306	33	29,125	132,538	184,491
Melville	16	219,942	235	404,057	288,433	738,486
Melfort	25	290,821	57	54,926	133,826	267,866
Moose Jaw	111	5,254,710	1,806	2,550,861	11,850,696	18,798,823
Moosomin	15	77,779	24	20,790	54,979	110,764
North Battleford	34	741,471	240	310,331	553,431	1,094,454
Prince Albert	48	1,833,827	466	575,009	2,182,960	3,303,207
Regina	173	12,934,148	2,450	3,848,881	10,522,405	20,880,332
Rosthern	14	143,906	19	18,415	79,658	126,584

16.—Statistics of Manufactures by Cities, Towns and Villages of 1,000 population and over, 1920—concluded.

Cities and Towns.	Establishments.	Capital.	Employees.	Salaries and wages.	Cost of materials.	Value of products.
	No.	$	No.	$	$	$
Saskatchewan—concluded.						
Saskatoon	173	7,135,657	1,642	2,171,531	7,328,768	11,597,027
Shaunavon	17	99,933	41	57,743	45,455	135,521
Swift Current	30	314,326	198	265,610	255,922	731,438
Watrous	4	28,183	8	12,947	8,959	33,010
Weyburn	32	522,328	112	153,504	430,818	731,356
Yorkton	32	395,064	87	106,320	376,459	649,986
Alberta—						
Blairmore	9	276,419	82	140,658	142,664	391,513
Calgary	332	26,151,225	5,670	7,828,482	22,384,770	37,214,562
Camrose	27	236,097	78	93,051	347,655	561,425
Cardston	15	147,438	22	18,474	106,724	151,545
Coleman	4	59,425	26	35,560	17,357	67,300
Edmonton	306	17,753,619	4,720	5,981,330	19,611,249	31,939,693
High River	19	255,825	41	39,636	71,653	163,220
Lacombe	13	100,851	23	26,020	53,525	112,293
Lethbridge	85	4,203,764	673	955,522	1,672,613	3,650,847
Macleod	18	267,635	78	94,718	293,839	455,567
Magrath	4	9,086	7	7,040	862	13,036
Medicine Hat	77	5,987,772	889	1,141,278	9,615,424	12,178,212
Raymond	6	179,490	12	12,695	79,684	119,495
Redcliffe	12	2,138,286	324	414,417	397,194	1,440,174
Red Deer	27	332,289	141	160,558	281,575	530,641
Stettler	22	179,579	62	68,372	220,202	396,482
Taber	11	119,380	24	35,949	26,223	80,342
Vegreville	21	164,886	39	40,035	95,561	175,367
Wetaskiwin	28	271,817	60	63,353	184,850	328,202
British Columbia—						
Cranbrook	24	248,687	154	209,411	153,358	447,809
Chilliwack	21	85,755	46	48,300	71,616	160,184
Cumberland	14	171,289	88	103,002	83,117	283,037
Fernie	28	1,732,228	242	344,624	926,892	1,691,684
Grand Forks	8	170,447	46	53,466	90,414	197,009
Kamloops	46	729,353	292	407,563	378,367	1,043,635
Kelowna	40	1,109,855	259	301,260	708,912	1,225,557
Ladysmith	14	73,860	40	48,681	68,990	237,342
Nanaimo	61	766,389	405	375,034	535,865	1,258,793
Nelson	53	1,271,643	380	518,763	520,303	1,347,728
New Westminster	111	6,903,431	1,792	2,435,919	7,648,396	13,188,776
North Vancouver	27	1,780,561	958	1,442,361	1,361,263	3,571,432
Prince Rupert	45	5,645,396	1,063	1,514,508	2,400,450	4,327,126
Revelstoke	21	339,556	224	334,557	220,708	639,426
Rossland	13	5,122,963	74	128,784	73,768	912,922
Trail	14	80,391	45	61,050	87,892	208,550
Vancouver	1,065	85,804,549	24,674	24,303,737	51,482,786	98,689,520
Vernon	34	562,900	136	153,726	213,910	527,077
Victoria	333	19,300,586	2,719	3,254,090	6,987,948	15,822,037
Yukon—						
Dawson	11	1,435,574	34	57,566	10,408	152,319

3.—Typical Individual Manufactures.

The foregoing discussion has furnished a general view of the recent development of the groups under which, to facilitate the comparison of one broad type of manufacturing with another, the numerous manufacturing industries of Canada have been classified. To supplement this treatment it is considered desirable to describe the evolution of individual industries, but considerations of space make it impossible to deal with any but a few representative developments. The flour milling industry, the boot and shoe industry, the woollen industry, the iron and steel industry, and the chemical and allied products industries, have been selected for treatment in this edition of the Year Book, to be followed by similar studies of other industries in subsequent issues.

1.—The Flour Milling Industry.

Since Canada is primarily an agricultural country and her chief raw material is wheat, it is natural enough that flour milling should occupy a leading position among our manufactures. It was the first manufacturing industry in gross value of product in 1919 and the second in 1920, and its products enjoy a high reputation in many overseas markets.

The French Régime.—Flour milling dates back to the very earliest days when the first permanent Canadian settlement was made in 1605 by the French at Port Royal, (Annapolis), Nova Scotia, where in the same year the first water wheel to turn a millstone for the grinding of wheat on the North American continent, north of Mexico, was erected. Other mills were constructed with the growth of settlement in New France, the number increasing from 9 in 1665 to 118 in 1734. Under seigneurial tenure the seigneur was given the right to build a mill within his domain, to which his dependants were obliged to bring their grain to be ground into flour. For the use of the mill the seigneur was entitled to a toll of one-fourteenth. This system has been regarded as a burden on the early agriculturists, but, as a matter of fact the toll retained was in many cases insufficient to pay the wages of the miller, much less provide a profit for the seigneur, though the authorities continued to insist that seigneurs should build and operate mills.

Upper Canada.—The coming of the United Empire Loyalists to Upper Canada led to the erection of mills for the grinding of grain produced in the new settlements. One of the earliest mills was built at Niagara Falls in 1786. An Order in Council passed by the Imperial Government to encourage the building of mills, provided that upon application the privilege of erecting mills on government water power sites should be granted to responsible parties for a specified time, after which the mill and water power were to revert to the government; but a revision of these conditions, which frequently resulted in the miller losing his property as it was about to become profitable, was found necessary to put the industry on a satisfactory footing. The Napoleonic wars caused a rapid increase in the price of cereals and an export business in wheat and flour grew up, the exports of flour increasing from 11,000 brls. in 1793 to 42,000 in 1808.

The Industry in 1830 and later.—The industry had now become firmly established, as in 1831-2 393 mills were operating in Lower Canada and 319 in Upper Canada. The exports of flour to Great Britain increased from 96,000 cwt. in 1831 to 479,000 in 1840. To stem the strong agitation which had arisen in Great Britain for the repeal of the Corn Laws, a special preference was established in 1843, whereby Canadian wheat and flour were admitted to British markets at the nominal rate of one shilling per quarter of 480 pounds. While this preference did not help Canadian agriculture as much as had been expected, the milling and carrying trades, with Montreal as their centre, were greatly benefited. In view of the heavy investment in establishments of a permanent character and the completion of the St. Lawrence canals for the purpose of diverting a profitable trade into Canadian channels, the repeal of the Corn Laws, in 1846 and the final loss of preference in British markets came as a severe blow to the Canadian milling and grain trade. With the British preference gone it seemed advisable to Canadian milling and transportation interests to link up with the main trade movement of the continent and to endeavour to make the St. Lawrence the joint exit for all North American grain. The revival of Canadian trade which began in 1849 was the result of three causes, the beginning of railway building on an extensive scale, the Reciprocity Treaty of 1854 and the

Crimean and American Civil wars, all of which led to high prices for Canadian farm products.

The Modern Phase.—The next important change in the milling industry was the introduction into Canada of the gradual reduction Hungarian process or roller milling. Large scale production in Canadian milling began with competition between the two processes, stones and rollers. Many of the small mills were unable to compete with the larger mills in the production of flour, and either disappeared or were transformed into chopping mills. By the eighties the roller process had secured a virtual monopoly of the flour milling industry in Canada. The farmers lost their market at the local mill, where previously the grain had been bought and milled to be shipped away as flour. Elevators sprang up at railway points and the grain was ground at the large milling centres.

The opening of the West provided the vast supply of wheat needed by the new milling industry. With the extension of transportation facilities more and more new land became available for agriculture. The high quality of Canadian wheat was now recognized throughout the world, and Canada's large export trade in wheat and its products developed. With the increase in the available supply of wheat and the extension of the markets, the milling industry has grown apace, so that to-day it has attained a capacity far beyond the needs of domestic markets. The rapid increase in the export trade is shown by a reference to the number of barrels shipped to other countries, which stood at 1·1 million in the fiscal year ended 1901, 3·0 million in 1911, 6·0 million in 1921, 7·4 million in 1922 and 10·2 million in 1923.

Present Milling Capacity.—The total number of mills operating in Canada during 1923 was 1,333, with a total daily capacity of 128,225 barrels of flour. Over 110,000 barrels per day are represented by 163 large merchant mills. Easy access to the Atlantic seaboard has been a determining factor in deciding the location of the mills. In early times Montreal became the centre of the industry and has held its predominant position to the present time. The more important milling centres in Canada with their capacities include: Montreal, 19,400 brls. daily; Keewatin, Kenora, Ontario, 14,800 brls.; Port Colborne, Ontario, 14,000 brls.; Winnipeg-St. Boniface, Manitoba, 8,625 brls.; Medicine Hat, Alberta, 4,800 brls. and Peterborough, Ontario, 4,500 brls.

Value of Materials and Products.—The total cost of grains used in the flour and grist mills of the Dominion in 1921 was $146·1 million, and an additional $11·1 million represented the cost of the grain used in the chopping mills. The total cost of materials, including containers, was $164·6 million. The total value of products amounted to $194·8 million, of which $179·6 million represented the product of the flour and grist mills and $15·1 million the chopping mills. The value added by manufacture in the industry was $30·2 million.

Out of a production of 15·3 million brls. during 1921 about 7·3 million brls. were exported, leaving 8·0 million brls. available for domestic consumption, the imports being too small to affect the result materially. Based on a population of 8,800,000, the per capita consumption of wheat flour in Canada was ·92 brls., valued at $8.69.

The essential statistics of production and exportation of wheat flour by months, for the crop year ended August 31, 1923, are given in Table **17.** The production was 18·8 million brls. and the export trade amounted to 11·1 million brls., as compared with an output of 15·5 million brls. and an export of 7·9 million brls. during the crop year ended August 31, 1922.

17.—Production and Export of Wheat Flour by Months during the Crop Year ended August 31st, 1923.

Month.	Wheat Ground.	Wheat Flour Produced.	Wheat Flour Exported.
	Bushels.	Barrels.	Barrels.
1922			
September	6,881,523	1,552,566	697,379
October	9,452,479	2,156,257	855,232
November	9,758,599	2,228,401	1,214,462
December	8,520,698	1,947,775	1,462,651
1923			
January	7,218,825	1,643,794	1,025,357
February	6,432,297	1,472,959	779,418
March	7,363,245	1,676,668	1,220,942
April	6,057,907	1,383,188	832,298
May	5,777,454	1,325,246	644,725
June	5,001,673	1,145,936	904,619
July	5,310,925	1,206,774	775,176
August	4,656,665	1,058,014	656,795
Total 1922-23	82,432,290	18,797,578	11,069,054
Total 1921-22	**69,530,356**	**15,527,310**	**7,878,589**

Other Statistics.—The total number employed in 1921 in the flour milling industry was 7,024, with a total annual payroll of $8·3 million. The mills had in 1921 a physical value of approximately $37,000,000, and the working capital employed was another $22,000,000. These mills are widely scattered, every province having a share, though the following lead with capital investment in millions of dollars as follows: Ontario, $33·5; Quebec, $11·0; Manitoba, $6·4; Saskatchewan, $5·0 and Alberta, $3·7.

The total power equipment of the industry was 118,825 horse power, of which 52,635 was the rated capacity of the electric motors. To a very great extent future expansion will be governed by the development of hydro-electric power. The operation of flour mills is not a business in which much labour is employed, hence the relatively high wage standard in Canada is no great handicap in the competition for export business. The superlative quality of the country's wheat, combined with its natural advantages for the location and operation of mills, supplies a basis for a manufacturing industry of the greatest importance.[1]

2.—The Boot and Shoe Industry.

The boot and shoe manufacturing industry in Canada dates back to the earliest days. It is first mentioned in communications forwarded to France by the Jesuits in 1667, stating that it was impossible for a country to exist entirely without manufactures, and that there was already in operation in the colony a shop for the manufacture of shoes and hats. The first census of New France, taken in 1667, records a population of 3,215 persons, including 20 shoemakers. In 1671 approximately one-third of all shoes were manufactured from leather locally tanned. The tanning processes until about this time were exclusively carried on by farmers. The first transitional stage in the industry was taken when a tannery was established at Quebec in 1670 and ox and moose skins were subjected to the tanning process.

Progress of the Industry.—No public record is readily available on the development of the boot and shoe manufacturing industry during the next hundred years. Up to about 1860 the retailers had been purchasing their stocks mostly from

[1] A special historical survey of the flour milling industry was issued by the Bureau of Statistics in 1923

the manufacturers of the United States; only a small quantity of Canadian-made shoes were marketed through the stores. The shoemakers at that time were engaged for the most part in supplying made-to-measure boots which they delivered direct to their customers. In 1859, however, the import duty was increased from 12½ p.c. to 25 p.c. This additional protection proved a stimulus to the growth of shoe manufacturing in Canada, and available statistics record a continuous progress from that date to the present, the output increasing year by year, especially in the medium and coarse grades. Imports at the same time diminished and an export trade was begun. The finer grades of shoes were supplied by the manufacturers of the United States until about 1882, when Canadian factories began the production of fine shoes on a larger scale. Three years later, the total imports were only an inconsiderable portion of the consumption, and such sales as took place indicated a last effort on the part of the American manufacturers to retain the Canadian market by granting to their customers the most favourable prices and conditions.

Introduction of Machinery.—Prior to Confederation the handicraft system of producing boots and shoes was general, and very little machinery was used. The first recorded machinery dates from 1847, when Brown and Childs, operating in Notre-Dame Street, Montreal, imported several sewing machines for stitching uppers. This development was not well received by the workers, and when the Parliament Buildings were destroyed in 1849 police and militia were required to save the factory of Brown and Childs. Pegging machines were next brought into use. The McKay machine for sewing soles found its way into shoe factories during the period 1867-70; available data would indicate that Sholes and Ames of Montreal were the first to use them. The utmost secrecy was maintained for some time as to the mechanism and the operation of these machines. Shortly after the use of the McKay sole sewing machine, the screw wire machine and Goodyear machinery were introduced, together with a number of edge trimming and finishing devices, as well as several lesser machines, skivers, rollers, etc. Canadian inventors provided the boot and shoe industry with several new and ingenious machines, and made improvements on imported machinery.

Centres of Production.—The cities of Quebec and Montreal soon took pre-eminence in the field of boot and shoe manufacturing, and today between them furnish approximately 50 p.c. of the total output of the industry. Not until the last decade of the 19th century was manufacturing on any large scale carried on outside of the borders of Quebec province, but in this period several important factories with an increasing output were established in the province of Ontario. To-day the industry is practically limited to the two provinces, less than 10 p.c. of Canadian production coming from factories in other provinces. A statement regarding shoe manufacturing in Montreal in 1882 was prepared for the Montreal Board of Trade, in which it was claimed that 30 boot and shoe factories existed, employing 3,500 persons of both sexes. The output was given at four and one-half million pairs valued at $5,400,000, while the total Canadian production of that year was placed at 6,750,000 pairs, giving Montreal 66 p.c. of the total Canadian output. The machines in use in Montreal factories in 1882 were reported as follows:—675 sewing machines; 34 pegging machines; 28 sole sewers; 23 sole cutters; 8 heeling machines; 45 eyeletting machines; 28 punching machines; 23 sole leather skiving machines; 56 other skiving machines; 34 rolling machines; 23 heel finishers; 23 edge finishers; 28 buffing machines and 17 beating out machines.

Modern Manufacturing Methods.—In the decade 1880 to 1890 the art of shoemaking was revolutionized through the adoption of the Goodyear machinery.

During this period the original models of the highly complicated machinery in use to-day were first introduced, permitting development by rapid strides and tending to centralization of production in factories of large capacity. This development is best illustrated by taking the first census after Confederation, *i.e.*, 1870, which reported 4,191 leather shoe manufacturing factories, employing 18,719 persons and producing boots and shoes to the value of $16,133,638. The very large number of establishments in that year shows very clearly the nature of the industry at that time. Individual establishments of small size predominated, employing but little help; the majority of such plants could not be called factories in the present meaning of that term, their average production being under $4,000. In 1921, factories producing less than $10,000 worth of goods number only 19 out of a total of 177, five factories reporting outputs of $1,000,000 and over.

Commodity Statistics.—The cost of materials used in the boot and shoe manufacture increased continuously between 1917 and 1920, the peak in 1920 showing a total outlay of $40,300,000. The reports for 1921 show a total cost of $23,400,000, a decrease of $16,900,000 or 42 p.c. The materials used are subdivided into upper materials, bottom materials and findings. The upper materials in 1921 cost $12,400,000 or 52·8 p.c. of the total, bottom materials $6,900,000 or 29·4 p.c. and findings $4,100,000. Leather for uppers and linings shows a total of 29,400,000 square feet for the leathers purchased by measure and 1,200,000 lbs. for purchases by weight. Sole leather in bulk is reported as 11,100,000 lbs. in addition to the 4,000,000 pairs of cut soles.

In the classification of the boots and shoes manufactured in 1921 boots and shoes, whether for men, ladies or children, were counted as a pair uni t under the various processes. The largest production is reported under McKay m ade shoes, with a total of 5,600,000 pairs in 1921 as against 6,600,000 pairs in 1920, or a decrease of 14·7 p.c. In the second place are found welt shoes with a total of 3,700,000 pairs in 1921 compared with 4,600,000 pairs in 1920, a decrease of 18·8 p.c.

That there was a decrease in production during 1921 is best indicated by the statistics of quantities. The year 1919 shows a total of 18,900,000 pairs, and in 1920 the quantity is given as 17,700,000 pairs, while in 1921 the total is down to 14,700,000 pairs, a drop of 2,900,000 pairs from 1920 and 4,100,000 pairs from 1919. The values on the other hand show an increase of $3,500,000 from $63,300,000 in 1919 to $66,800,000 in 1920, but a large decrease of $22,200,000 or nearly 33 p.c. to the $44,700,000 reported in 1921. Not only is the decreased value of output due to the smaller production, but also to a general falling off in average prices. Imports amounted to $3,500,000 in 1920 and fell to $1,700,000 in 1921, a drop of 51·7 p.c. Exports show a still greater decrease from more than $4,900,000 in 1920 to $1,100,000 in 1921, a difference of $3,800,000 or 77·2 p.c., the totals including rubber boots and shoes. As the values used in the compilation of the statement were factory values of domestic products or wholesale costs of exports and imports, the totals do not represent the cost to the Canadian public for footwear, but instead represent the value of boots and shoes at the time they enter the commercial field for distribution. A tendency on the part of wholesalers and retailers to lessen their stocks developed in 1921, so that the actual factory value of boots and shoes purchased by the public would be higher than that indicated above.

In a survey of employment since 1917 it is noted that the highest payroll was reported for the year 1920, with a total of $14,200,000 paid to 8,364 male and 4,866 female employees. There was a decrease during 1921 of $2,100,000 in the pay roll, which was reported at $12,100,000, though there was an increase of 259 employees,

the totals being 8,496 males and 4,993 females. The highest employment was provided in 1919 with 9,775 males and 5,932 females, a total of 15,707 employees. The total of 13,489 in 1921 was a decrease of 2,218 employees or 14·1 p.c. from the peak of 1919.

3.—The Woollen Industry.

The importance of the textile group may be judged by the capital invested at the close of 1921, $264,000,000. The cotton mills comprise the chief branch of the group, but the woollen section is now firmly established, the preference once shown by the consuming public for imported as opposed to Canadian woollens having largely disappeared. The range covered is quite extensive, embracing tweeds, homespuns, serges, broadcloths and overcoatings. Flannels, blankets and mackinaws are of course characteristic Canadian products. Statistics show that at the end of 1921 some 88 woollen mills in operation in Canada, representing an investment of $30,562,848, gave employment to 5,815 people.

Historical Note.—The manufacture of woollen cloth in Canada commenced soon after the arrival of the earliest colonists. Talon, then intendant of New France, reported in 1671 that the colonists were making practically all articles of clothing required, and from that beginning of handicraft industry there sprang up dozens of small custom carding plants, generally operated in connection with a grist mill or saw-mill. Many of the large woollen mills in operation today are the successors of these carding mills, developing with the country and as new machinery was invented.

Early Carding and Fulling Mills.—Early records of the woollen industry in Canada show that there were 91 carding mills and 79 fulling mills in Lower Canada in 1827, and 186 carding and 144 fulling mills in Upper Canada in 1842. In New Brunswick a census taken in 1851 indicated that 52 carding and weaving mills were located in the province. In Upper and Lower Canada and the Maritime provinces there were at this time in all about 385 carding and fulling mills and about 250 establishments where weaving was carried on, apart from the handloom weaving done in the homes of the people. The extent of home industry is shown by the census of 1851, which shows that New Brunswick produced in that year 622,237 yards of home-made cloth; Nova Scotia 1,129,154 yards of home-made flannels and fulled and unfulled cloths; and that 4,765,000 yards of home-made flannels and cloth were produced in the two Canadas.

Introduction of the Factory System.—The factory system in textile manufacturing was now being introduced. After 1851 the prduction of home-made cloth did not increase to any extent, for the census of 1871 showed a total production for Eastern Canada of only 7,641,917 yards of home-made cloth; by 1891 it had dwindled till the total was only 4,320,838, over half of which was produced in Quebec.

The manufacture of cloth in power looms in Canada dates back to about the time of the Rebellion of 1837, although operations in a small way were carried on in a mill established in 1827 at l'Acadie, Quebec, by Mahlon Willett, father of the late S. J. Willett of Chambly. This mill was equipped with a 24-inch carding machine, a "Billy" for making slubbing, a spinning "Jenny" of seventy-five spindles, and two hand looms. This mill was operated for three years, when it was moved to Chambly, where water power was available. It was conducted on this basis until the year of the Rebellion, when the new "Golden" process, consisting of a first and second breaker and the condenser system of carding, was introduced, together with a spinning jack and four power looms.

The first complete woollen mill in Ontario is supposed to have been founded in 1820 near Georgetown by the Hon. James Crooks. This mill was later taken over

by Barber Bros. and in 1852 moved to Streetsville. About this time also a knitting mill was established at Paris by John Penman and others. The industry was also introduced in the Ottawa Valley, a mill being established by James Rosamond and James Bell in 1845 at Carleton Place, and twelve years afterwards moved to Almonte. A large mill was established at Cobourg about this time, and in 1866 the Paton Woollen Mills, which had been founded in Galt, Ontario twelve years before, were moved to Sherbrooke, Quebec. Small custom carding and weaving mills sprang up everywhere, and in 1871 270 establishments were engaged in woollen manufacturing in the four provinces included in the census area. The annual wage bill was $917,827; the annual value of the products, $5,507,549; and the hands employed 4,453. There were in addition 650 carding and fulling mills with a product valued at $2,253,794, employing 1,224 hands and paying in annual wages $146,370.

There now occurred a steady tendency in favour of factory-made goods. These mills made cloth and their salesmen went about the country, often from farm to farm, trading the cloth for wool, farm produce, grain or money; the latter quite rarely, as it was a scarce commodity in that period. This trade induced mill owners to install power looms, and many of the custom mills put in manufacturing cards, jacks and looms, and turned out coarse tweeds, étoffes, flannels, homespuns, etc., as well as doing the custom work. The industry had grown to considerable magnitude by 1885, when most of the woollen mills of the present time had been established. The custom mills were beginning to disappear, as the larger mills were producing goods of a better quality, with the result that the people began to get away from the hand-loom product. The data for 1885 of the 240 mills doing their own carding, spinning and weaving, with an equipment of 515 cards, 1,885 looms and 107,870 spindles, indicate the rapid growth of the industry.

In a slight sketch such as this little comment can be added on the happenings in the industry up to 1900, except that a very sound and satisfactory development took place. During this period many of the custom mills and small one-set mills, which had outlived their usefulness, gave way to the larger and more progressive mills which had kept their machinery up-to-date and were able to turn out a better class of product. Although the number of woollen mills had decreased to 236, the number of looms and cards had increased to 2,120 and 477 respectively. The looms were of the broad and narrow type, but in this computation two narrows are taken as one broad for purposes of comparison. The aggregate production of the mills in 1899 was 13,992,000 yards. There were 333 carding and fulling mills still in operation, but the custom business was fast disappearing and during the next few years the majority of these mills passed out of existence.

Decline of the Industry.—The woollen industry in Canada declined steadily after 1899, as during the next eight years 88 mills with an equipment of 129 cards and 559 looms were forced to close their doors. The industrial stocktaking in 1910 indicated that only 78 woollen and worsted mills were in operation in Canada, operating 224 cards and 1,154 looms, and producing approximately 7,616,000 yards of cloth. The value of the woven fabrics produced by the mills was $7,339,541, or about one-third of the total of the actual consumption of woollen woven goods.

Expansion of Knitting Mills.—Any expansion taking place during the period from 1900 to the outbreak of the war in 1914, was chiefly in the manufacture of knitted goods. A number of knitting mills were already in operation at the commencement of this period, and many of the woollen mills had established knitting departments manufacturing hosiery and underwear. During these years knitted goods became increasingly popular, and a decided development took place in the

production of knitting machinery capable of manufacturing better goods and of much wider variety. A number of the woollen mills which had been closed following operation of the preferential tariff were re-equipped as knitting mills. The knitting industry during this decade became much the most prosperous part of the woollen industry. Several very large successful mills were developed and numerous smaller mills were started. The invention and production of machines for specialty work and the growing demand for knitted goods encouraged expansion. The initial cost of equipment was comparatively small, facilitating the founding of small plants.

The Industry during and since the War.—At the outbreak of the war the whole woollen industry was in a fairly flourishing condition, so that the enormous demand for both woven and knitted goods found the industry prepared to meet it. For the next five years production was pressed to the limit. Established mills were re-equipped and enlarged and many new mills were begun. The knitting industry expanded nearly 100 p.c., and the capacity of woollen weaving mills was increased. Practically every mill in the country produced some sort of war material. Khaki frieze, serge, hosiery, underwear, puttees and blankets were in enormous demand for war purposes, and in addition the ordinary domestic demand was thrown back on the Canadian mills, owing to the inability of the British mills to handle export business. That the home manufacturers were able to meet this demand is greatly to their credit. Mills operated to capacity night and day, and profits were to a large extent used for new equipment and enlargements, with the result that by 1920 the industry was in a flourishing condition, well equipped, and in better shape than ever before to meet the changing conditions.

The slump in trade that began in 1920 and continued during the next year, with resultant losses in inventory and from cancellations, was a keen blow to the industry. Some of the newer mills failed, but the industry generally met the losses successfully. Merchandise of all kinds from England and the United States flooded the Canadian markets, but the season of 1922 found business rapidly getting back to more normal conditions, with the home mills holding their own against outside competition.

Development of the Worsted Spinning Industry.—An interesting feature of the expansion of the woollen industry in recent years is the rise of the worsted spinning industry. While several mills had small combing and spinning departments, for many years this branch of the industry had never been successful. Domestic wools are most adaptable for combing purposes, but domestic combers have never been, and are not now, in a position to compete with the larger factories of Great Britain. However, the spinning of worsted yarns from imported tops has received much attention lately, with the result that a number of well-equipped spinning plants are now in operation, manufacturing both oil spun (Bradford system) and dry-spun (French system) yarns, chiefly for the knitting trade.

The Present Position of the Woollen Industry.—The woollen industry may be divided into three sections, according as the chief product of value is cloth, yarn or felt goods. Of the 88 woollen mills in operation during 1921, 69 were engaged chiefly in manufacturing cloth, 16 in making yarns and 3 in making felt goods. The total value of woollen goods manufactured during 1921 amounted to $18,337,117, as compared with $28,118,565 in 1920. The cost of materials in 1921 was $8,655,084, leaving $9,682,033 as the value added by manufacture.

The wool clip in Canada during 1921 was 21,251,000 lbs., valued at nearly $3,000,000. The imports were 9,780,102 lbs., while the exports of domestic and

foreign production were 3,589,779 lbs. Thus, the apparent consumption of wool in 1921 was 27,441,323 lbs. The quantity of wool used in the knitting and woollen mills in 1921 was 12,239,483 lbs., worth $4,514,234. The portion used by the knitting mills was 2,320,072 lbs. In addition to the imports of raw wool, valued at $2,500,000, the following intermediate woollen and worsted goods were imported during 1921 for further manufacture in Canadian mills (values in parentheses): noils 1,247,719 lbs. ($465,219), tops 3,966,947 lbs. ($1,953,641), waste 211,212 lbs. ($116,779), woollen yarn 1,339,778 lbs. ($1,758,892), and woollen and worsted yarn 213,493 lbs. ($385,384).

4.—The Iron and Steel Industry.

The manufacture of pig iron and steel is a comparatively new industry in Canada. Industries using imported iron and steel had reached a high stage of development before the manufacture was established on a permanent basis in Canada, although several attempts at manufacturing pig iron had been made on a small scale in earlier years. The ever increasing consumption of iron and steel, and the phenomenal growth of the industry as a whole during the last twenty years, are most strikingly shown by comparing the production of 1923 with that of 1903. The monthly average output of pig iron during the first nine months of 1923 was 63,896 short tons, as compared with a monthly production of 22,021 tons in 1903.

Early Iron and Steel Plants.—*St. Maurice Forges.*—The bog ore in the St. Maurice district near Three Rivers, though previously known to the Indians and Jesuits, was first reported in 1667. Mining operations were begun three years later by Frontenac, but it was not until 1730 that M. Francheville was granted a license to work the mines. The enterprise was not successful, and five years afterwards the firm surrendered its rights to the Crown. The first blast furnace was built in 1737 by Cugnet & Cie. or "La Compagnie des Forges", who were advanced 100,000 livres by Louis XV for the purpose. Six years later the works reverted to the Crown and were operated in the name of the king. Skilled workmen were sent out from France, who rebuilt in part the blast furnace and erected a Walloon hearth for refining. The plant included two pairs of forges, wooden bellows and melting ovens. The chief products, in addition to such intermediate goods as iron bars, included cannons and mortars for military operations, and kettles and stoves which found a ready sale throughout the colony. The iron was obtained from bog ore lying in veins six to eighteen inches deep, resting on white sand and covered with a thin mould. Limestone was used as a flux, and the surrounding forests yielded abundant supplies of charcoal. When the plant was inspected by M. Franquet in 1752 considerable expansion had been effected. Water power was utilized for running the machinery. The boiling metal was poured into a gutter of sand and moulded into stoves, pots and kettles, or cooled and hammered into bars. The iron was of excellent quality, selling at the king's stores at Quebec at the rate of from 25 to 30 castors (beaver skins) per cwt. For one hundred years, the forges were leased to various companies and operated with more or less success. The manufacture of iron was described in 1809 as the most important industry of Canda, and a considerable export trade in cast iron articles, particularly in stoves, was enjoyed. The plant was most active in the 1830's, when mill machinery, large potash kettles, and other cast iron goods, as well as wrought iron for distribution within the province, were the principal articles manufactured, and a quantity of pig iron and bar iron was produced for exportation. The employees numbered 250 to 300 men, of whom the overseers and employees in the model department were English and Scotch and

the unskilled workers generally Canadians. Consequent upon the exhaustion of raw materials the plant was abandoned in 1883, when it was the oldest active furnace on the continent.

The Radnor Forges.—The Radnor Forges at Fermont in the Seigneurie of Cap de la Madeleine of the county of Champlain, are situated about ten miles from Three Rivers, and were erected about 1860 by Messrs. Larue and Co. The establishment was extensive, consisting of a blast furnace, forge and large rolling mill, as well as a car wheel foundry in Three Rivers, 40,000 acres of land also forming a part of the property. The annual production was 2,000 tons of cast iron, resulting from the use of from 4,000 to 5,000 tons of bog ore. The employees varied from 200 to 400 men, part of whom were engaged in digging and transporting the ore to the plant. The finished products included car wheels manufactured in the auxiliary foundry at Three Rivers, whilst the rolling mill furnished iron for the manufacture of scythes and nail rods.

First Furnace in Ontario.—The first attempt to manufacture iron in Ontario was made at Lyndhurst, then called Furnace Falls, on the Gananoque river, where in 1800 a blast furnace was erected and water power utilized to drive the machinery and work the blast. The blast furnace was abandoned after two years on account of the inferior quantity of the ore and its distance from the plant. The attempt to cast hollowware for the use of settlers proved a complete failure. A forge for the manufacture of bar iron was active until 1812, when operations were discontinued on account of the derangement of business consequent upon the war.

Normandale Furnace.—The next attempt was made in 1815 at Normandale in the county of Norfolk, near lake Erie. A furnace to smelt bog ores was built by John Mason, who was attracted by the favourable factors of the location, including a supply of water power furnished by a nearby creek, moulding sand conveniently located on the site of the furnace, and a great variety of timber available for charcoal. Six years later a new blast furnace was constructed and operated until 1847 by Joseph van Norman and his associates. In the early stages the entire production of iron was converted into various kinds of castings, as there was no market for pig iron. Some were exported to Buffalo, and a vessel load of stoves and castings was sent to Chicago. After the opening of the Welland canal two vessels were employed in the distribution of iron wares to the district within reach of lake Erie and lake Ontario. On account of the limited circulation of money in the country, business was carried on largely by barter. Products which the customers had for sale were brought to the furnace and exchanged for the wares, or due bills were taken payable in iron ware. Among the articles manufactured were sugar kettles and kettles for making the potash which was the chief exportable article of the time.

First Furnace in Nova Scotia.—Coal and iron ore were discovered in the Maritime provinces as early as 1604, but it was not until the third decade of the nineteenth century that a small quantity of bar iron was made in a Catalan forge from the ores at Nictaux. The Annapolis Mining Company erected a large smelting furnace, coal houses and stores at an expenditure of £30,000. Smelting and casting went on favourably for a short time, as the iron produced was excellent both for foundry work and for refined bar iron. The works, on account of their small maximum capacity of not over 13 tons of cast iron per week, were unable to compete with British-made goods.

Londonderry.—The plant at Londonderry, operated from 1850 to 1879, was the most pretentious endeavour that had been made up to that time in the iron and steel industry of Nova Scotia. The ironworks, consisting of Catalan forges, one puddling

furnace, one heating furnace, one furnace, one metal helve and one blower, together with ore crushing rolls, were built in 1850 and later years, with the purpose of developing the iron deposits of the Cobequid mountains, which had been favourably reported upon by Sir William Dawson. The building of the Intercolonial railway near the plant was a favourable factor, and a new company under the chairmanship of Dr. Siemens was formed in 1873 to take over the property. The manufacture of steel by the Siemens open-hearth process, steel rails, cast steel and spring steel, was proposed. The company expended $2,500,000 in building a modern rotatory furnace, a melting furnace with regenerative gas furnaces and other purposes. Like all pioneer enterprises the company had many difficulties to contend with, and in 1885 the concern was in liquidation.

Raw Materials.—The indifferent success of the early ventures in the manufacture of iron was due to several factors, including the supply and character of the ores and fuel and the extent and nature of the market. Of the iron ore deposits that were known few were satisfactory; the most successful of the early enterprises, those at Normandale and St. Maurice, were discontinued as the beds within reach were exhausted. The supply of fuel occasioned the greatest difficulty. Though Canada was well supplied with hardwoods for making charcoal, these were not always found within reasonable distance of the furnace. Before the end of the period in question the demand for charcoal iron was restricted to certain special uses.

Period from 1880 to 1914.—During the period from 1879 to 1896, the difficulty in smelting the ores of Ontario was such a discouraging factor that no furnaces were in blast. The bounty established in 1883 encouraged the production of pig iron, which fluctuated between 20,000 and 60,000 tons per annum in the next twelve years. The production was contributed by the charcoal furnaces of Quebec, and the Londonderry and New Glasgow furnaces of Nova Scotia. Toward the end of the century activity increased, and in the period from 1900 to 1914 reached a high level.

Nova Scotia Steel and Coal Co.—Prior to 1879 the Nova Scotia Forge Co., with a plant at Trenton, was engaged in manufacturing car axles and in general forge work, depending upon wrought and scrap iron as raw materials. It was found desirable to obtain a supply of mild steel as a substitute for the iron, and a plant was accordingly erected for the manufacture of steel from imported pig iron and scrap by the basic open hearth process. Another step was taken by the erection in 1892 of a blast furnace at Ferrona or North New Glasgow. The manganiferous character of the ores near New Glasgow causing some difficulty, the company acquired in 1894 a large iron deposit on Bell island in Conception bay, Newfoundland, and shipments to the New Glasgow furnace began in the next year. As the supply of coal from the Pictou field proved inadequate, the mining properties of the General Mining Association at Sydney Mines were purchased in 1900, and in the following year the Nova Scotia Steel and Coal Co. was formed to acquire the several enterprises in question. Coke ovens were built at the new property, but in view of the depreciation of coke by transportation and also the shorter distance from the Wabana mines, a new blast furnace was constructed at Sydney Mines in 1904 and the old furnace at New Glasgow was closed down. Additional equipment, consisting of 30 Bauer retort coke ovens, three batteries of 40 Bernard retort ovens, three 40-ton open hearth steel furnaces and a rolling furnace to be used as a mixer, were put in operation during the next year. Two new rolling mills with the necessary power plant were installed at New Glasgow in 1910, and two years afterwards the

Eastern Car Co. was organized to build steel railway cars at New Glasgow, using steel made at the plant of the associated company.

Dominion Iron and Steel Co.—The Dominion Coal Co. revolutionized the whole coal trade in 1893 by expanding the market to New England and St. Lawrence ports. The Canadian market was limited after the close of navigation on the St. Lawrence, and the New England market was interfered with by the Boston smoke nuisance law and increased import duties. The Dominion Iron and Steel Co. was formed by allied interests to establish an iron and steel plant at Sydney as a regular purchaser of the coal. The extensive building operations carried on during 1900 included four blast furnaces with a capacity of 250 to 400 tons of pig iron daily, ten basic open hearth steel furnaces of 1,000 tons' daily capacity, a 35-inch blooming mill, 400 Hoffman coke ovens, a coal washing plant, a machine shop and foundry. The wire rod mill was in operation in 1904 and the rail mill commenced the execution of government orders in the following year. A further expansion was effected in 1912, when two open-hearth mixers with a capacity of 500 tons each were added to eliminate the necessity of purchasing expensive ores. A third Bessemer furnace was ready in the autumn of 1911 to assure a sufficient supply of iron and a larger output of steel per furnace, 120 coke ovens were put in full blast late in the season, and a new cold rolling mill and extensions to the old cold rolling mill, which was converted into a bar and rod mill, were also added. A new merchant bar mill for rolling all sizes of merchant bar, rivet, steel bolt, and bar material, was also installed. The nail mill was operating by 1912, consuming a considerable portion of the product of the wire rod and wire mills.

The Steel Co. of Canada.—The Hamilton Blast Furnace Co., encouraged by the favourable terms offered by the city of Hamilton, erected a blast furnace with all modern improvements in 1895, and a steel plant, a spike factory and puddling furnaces, were added two years later. To obtain the full benefit of the Dominion and Ontario bounties it was intended to use exclusively eastern Ontario ores, but the content of sulphur was too large and it became necessary to import Lake Superior iron ore. Several 15 ton basic open-hearth furnaces were built in 1900, and a 250-ton blast furnace was built seven years later to supply a large amount of iron to consumers in Hamilton. New bolt and bar mills were also added to the equipment. The Steel Co. of Canada was formed in 1910 to amalgamate the Hamilton Iron and Steel Co. with the Montreal Rolling Mills Co. and other concerns. The additional equipment installed in 1911 included a blooming mill, a rod and bar mill at Hamilton, and two more 50-ton open hearth furnaces were put in operation in the following year.

Algoma Steel Co.—The Algoma Steel Co. was formed in 1901, and a large plant consisting of two Bessemer converters, a blooming mill and a rail mill with a daily capacity of 600 tons of Bessemer steel ingots and 100 tons of rails, was constructed. As the Helen mine ore did not contain the proper percentage of phosphorus, ore was imported from Minnesota. Contracts were let in 1905 for new open hearth furnaces of 200 tons' capacity suitable for the use of Helen mine ore. During the next two years new coke ovens were built and plans laid for new coke blast furnaces and steel furnaces, to keep the finishing mills supplied with raw materials. Further expansion in 1910 included the purchase of the stock of the Cannelton Coal and Coke Co., operating coal areas of 6,000 acres in West Virginia. One hundred and ten by-product Koppers coke ovens were built and in the next year an 18-inch and a 12-inch merchant mill to produce track fastenings were installed. From 1910 until the outbreak of war the expansion of the plant was almost continuous. A

35-inch blooming mill, a 28-inch rail mill, a 350-ton tilting melting furnace for the open-hearth department, three 40-ton open hearth furnaces and a 500-ton blast furnace were added to the equipment in 1911 and 1912. Additional open hearth furnaces and a merchant mill for the production of heavy structural steel were completed in 1914.

The War Period.—The iron and steel industry passed through many vicissitudes during the war period. The development between 1900 and the outbreak of the war had been rapid and practically continuous, and the dislocation of the first two years of war brought about a temporary setback. The receipt of munition orders, as well as the restriction of the overseas import trade, created a buoyant demand in 1916, which was immediately reflected in the activity of the primary iron and steel plants, encouraged by the efficient policy of the Imperial Munitions Board. The monthly production of pig iron was maintained at an average of about 98,202 short tons during the last three years of the war, while the average monthly production of steel was 140,214 tons.

Post-War Problems.—The problems of development and of intensive production to meet war demands were no more serious than were presented during the post-war period. After the war it was necessary to convert the machinery of the finishing mills from war to peace-time production, to find markets for the surplus production of plants that had been greatly expanded, and to endeavour to furnish employment to a force of employees far in excess of those employed under normal conditions. Contrary to expectations, prices fluctuated only slightly at the beginning of 1919 and then followed an ascending curve until the autumn of 1920. The beginning of 1921 saw the ending of a period of unusual industrial expansion and the beginning of a period of depression ushered in by falling prices. Considerable recovery was effected during the latter part of 1922, and in the first nine months of 1923 the average monthly production of pig iron, 84,000 short tons, exceeded comparative post-war records with the exception of the year 1920, when the average was about 89,600 tons. The amalgamation of the Dominion Steel Corporation, the Nova Scotia Steel and Coal Co. and related companies, to form the British Empire Steel Corporation, effected during the period under review, was of far-reaching importance from the standpoint of organization.

5.—Chemical and Allied Industries.

Early Conditions.—The first important demand for raw and manufactured chemicals, apart from their direct domestic and medicinal uses, came with the development of the textile industry. As a result of the organization of home and domestic industries, the necessity of dyeing and bleaching wool used in yarn and cloth became greater with each generation. Eventually coal became a source of chemical supplies, the coal tar intermediates forming the foundation of dyestuffs. Before the war Germany controlled the world market for dyestuffs, owing to the favourable nature of German coal and the advance of chemical research in Germany. During the war investigation into various dye processes was carried on in allied countries with a view to utilizing domestic supplies, and independence of the former source of supply is now assured.

At the emergence of the factory system it was found that the chemical industry lay at the foundation of many other industries. For example, as the soap industry requires large supplies of soda, supplies of salt for the recently established Canadian soda industry are being produced in Ontario. Again, the farmer has recently begun the use of artificial fertilizers, more especially as during the war the demand for

increased cultivation led to the breaking up of considerable new ground, which required fertilization; the chief materials in the manufacture of these products are sodium nitrate, ammonium sulphate and the potash salts. With the transition from an agricultural community to a more advanced industrial stage, centring in the main around the industrialized areas of Ontario and Quebec, various other industries developed, all of which needed chemicals in their processes.

Hydro-Electric Power and the Chemical Industries.—Chemical industries associated in many phases with the use of hydro-electric power have recorded marked growth in Canada in recent years. Owing to Canada's great water power resources and in particular to the fact that many water powers are situated near tidal waters, there is an opportunity in this country for the expansion and establishment of new chemical industries. Electric refining, at first applied to copper only, is now being extended to all the metals, and the electric current is also employed in their extraction from the ores. The production of aluminium, of the abrasives, of new refractory materials and of graphite, have already created large industries. The fixation of nitrogen, with its many subsidiary industries, such as the manufacture of nitric acid, ammonium nitrate, explosives, etc., the reduction of magnesium and the production of innumerable chemical compounds known at present only to the special trades requiring them, are now under commercial development. Noteworthy progress has been made in the output of calcium carbide, which can be readily marketed in countries dependent for their domestic manufacture on electrical energy derived from coal. Exports of this chemical increased in value from $161,000 in 1914 to $2,261,000 in 1922, mainly to the United States. The development of cheap electrical power has contributed to the advance of industries using electro-thermic reactions, the intense heat which it is possible to develop by electrical means being a specially advantageous factor.

Coal Tar Distillation.—Coal tar, accumulated in large quantities in the early days of gas making, was a by-product which, after having been a source of trouble, became of immense value owing to later research. Its only use in the earlier period was in burning under the retorts in the gas plant, where one part could be utilized with about four parts of coke. But the condition was altered by the discovery in distillates from coal tar of a number of important substances used as intermediates for the preparation of explosives, aniline dyes, synthetic perfumes and essences, disinfectants and medicinal preparations. It is now the practice to distil off the lighter constituents, obtaining the valuable intermediates, and to leave the residual pitch or tar of sufficient consistency to be used for all ordinary purposes. Formerly coal tar was obtained chiefly from illuminating and fuel gas manufactures, but the advent and general use of by-product coke ovens has brought about an enormous increase in the output of coal tar, and by far the greater part of the Canadian production is derived from the latter source. In the industry consisting of the distillation of coal tar and the manufacture of commodities such as disinfectants from coal tar and its products, two firms operating in 1920 discontinued in the following year, but the remaining nine firms accounted for 8·5 p.c. increase in the capital investment, in spite of the fact that the total value of the production declined to 58 p.c. of the $2,000,000 output indicated for 1920. The cost of materials in 1921 was $456,000, leaving $727,000 as the value added by manufacturing.

Heavy Chemicals.—The heavy chemicals occupy an important place in among the products of the nation, but it is not often that the utility of these commodities is appreciated by the general public. This indifference is due to the fact that acids, alkalies and salts, the principal products of the industry, are not readily

identified in the finished commodities of commerce; in addition, the production of the necessary heavy chemicals for use in further manufacture is often carried out in close proximity to the main plant, owing to the cost of transportation and the danger of handling large quantities of such products.

The manufacture of sulphuric acid is a factor determining the status of the chemical industry, and in a broader sense is an index of general industrial activity. Some 72,863 short tons 66° Baumé were manufactured in 1920, the materials used being 38,616 tons of Canadian pyrites and 13,500 tons of brimstone imported from Louisiana and Texas. More recently, sulphuric acid has been made by a plant in Ontario consisting of two acid chamber-units with a daily capacity of 120 tons. The acid is largely used in making acid phosphate for domestic consumption. The apparent consumption of sulphuric acid for Canada during 1921 was 44,530 tons, the production being 47,195 tons, the imports 94 tons and the exports 2,759 tons.

A division of this industry which is dependent upon hydro-electric power is the manufacture of calcium carbide, produced by fusing lime and carbon together at the temperature of the electric furnace. The process is a Canadian invention, but there are now a number of plants in other countries. The chemical is used extensively for the production of acetylene gas and the manufacture of calcium cyanamide. The three plants manufacturing calcium carbide in Canada are located at Shawinigan Falls, at Welland and at Merriton, Ontario. For the fiscal year ended March 31, 1923, the exports of calcium carbide were valued at $2,358,160. The manufactures in the calendar year 1921 were 70,794 tons, valued at $4,726,465.

Calcium cyanamide is manufactured in America exclusively on the Canadian side of Niagara Falls by causing a current of atmospheric nitrogen to pass over calcium carbide made red hot in an electric furnace. About 30,000 electric horsepower are used in the fixation of about 15,000 tons of air nitrogen every year for the manufacture of cyanamide and cyanide products. The former is marketed in the United States, and the latter, made by fusing crude cyanamide with common salt in the electric furnace, is shipped to the gold and silver mining districts of the continent for use in the reduction of ores. The production of calcium cyanamide in 1921 was 25,291 tons, valued at $1,486,753.

Employing upwards of 1,800 persons and making products valued at almost $14,000,000 annually, the firms engaged in the manufacture of industrial chemicals other than coal tar products, including sulphuric, nitric, and hydrochloric acids, caustic soda, salt cake, calcium carbide and compressed gases such as oxygen, hydrogen, ammonia and acetylene dissolved in acetone, have made rapid strides in recent years, until at the end of 1921 there were 50 plants in Canada engaged in these industries.

Paints, Pigments and Varnishes.—The increased use of paint and varnish in Canada has been due in part to the volume of new construction, but perhaps more to the growing appreciation of the value of conservation. The industry corroded pig lead in 1921 for the production of 7,637,000 lbs. of dry white lead and 11,953,000 lbs. of white lead ground in oil, in addition to 1,724,000 lbs. of litharge. The total quantity of ready mixed paints produced in 1921 was 2,372,000 gallons worth $6,909,000, and the varnishes were next in importance, with a production of 1,594,000 gallons, valued at $3,548,000. The imports of paints, pigments and varnishes in the calendar year 1921 were valued at $2,599,000; the exports were worth $488,503. The total value of Canadian production was $18,044,000.

Present Position.—The output of chemicals and allied products during 1921 was $87,200,000, as against $121,700,000 in the preceding year, a decline of $34,500,-

000. Toward the end of 1920 consumers demanded lower prices, and in 1921 a nation-wide reduction of inventories and deflation in prices occurred. The cost of materials reflected the lower prices prevailing, and for the group amounted to $42,400,000 in 1921 as compared with nearly $60,100,000 in 1920, a drop of about $17,600,000. Thus the value added by manufacture during 1921 totalled $44,700,000, as against $61,600,000 in the preceding year. Despite Canada's recent advances in the manufacture of chemicals her external trade in such products still shows a strongly adverse balance. During the fiscal year ended Mar. 31, 1923, the imports were $25,800,000, and the exports of Canadian products were $14,000,000.

IX.—CONSTRUCTION.

Construction is the most conspicuous example of a great industry carried on in almost complete dependence on a local demand. The building industry is not only the most widespread in its operations; it is one which expands most rapidly in good times, when it attracts great numbers of general and casual workmen. This characteristic explains the high rate of unemployment from which the industry periodically suffers. Again, apart from the effect of cyclical fluctuation of general business conditions, the construction industry is highly seasonal. In the winter there is a serious contraction, especially in outside operations, while in the other seasons the contractors employ a much larger number of men, casually engaged, than can be maintained throughout the year. A considerable portion of the men are in no sense skilled artisans and the supply of unskilled men is generally in excess of the demand. Moreover, conditions in the industry are being transformed on account of the increasing substitution of reinforced concrete for wood and brick construction.

Relation of Construction Industry to General Business Conditions.—Statistics showing activity in construction are of particular interest both to those engaged in the industry itself and to those concerned with the supplying of its raw materials, such as lumber, steel, cement, paint, glass and hardware. All of these latter industries are prosperous when the construction industry is active, and depressed when it is at a standstill; again, the effects of their activity and depression are felt throughout the whole field of industry, so that the current conditions in the construction industry react powerfully upon the whole economic life of the nation. Thus, in the period between 1909 and 1913, construction, largely financed with borrowed money, contributed in large measure to produce the "boom" of those years.

The growing recognition of the importance of the construction industry in the business cycle has led in recent years to the proposal that, since construction is largely carried on by public authorities, it should be stimulated by these authorities in periods of depression and suspended in "boom" periods, so as to contribute toward that stabilization of industrial conditions and of employment which is considered desirable. Thus, after the armistice, when a period of depression was apprehended, the shipbuilding programme of the Dominion Government provided employment for many thrown out of work by the stoppage of the munitions industry. Similarly, in the depression of 1921 and 1922, much employment was provided by the carrying into effect of the "good roads" programmes of the provincial Governments of Ontario and Quebec.

Statistics of construction are issued by the Dominion Bureau of Statistics under four headings: (1) a Survey of the Building and Construction industry, as carried on by contracting concerns; (2) Bridgebuilding; (3) Shipbuilding; and (4) Railway Construction and Maintenance.

In the general survey of production included in the present Year Book (see pp. 216-220), the value of production of the construction industry comprises the branches engaged in housebuilding and allied contracting, bridge building, electrical contracting and shipbuilding. The value of the contracts awarded in the four classes during 1921 was $121,836,367, while the cost of materials used was $45,439,960, as compared with $206,168,135 and $70,294,091 respectively in 1920. (Table 1). The number of salaried employees and wage earners, together with the amount of salaries and wages paid, is given for both 1920 and 1921 in Table 2.

1.—Cost of Materials and Value of Products in the Construction Industries, as reported to the Industrial Census, 1920 and 1921.

Industries.	Number of establishments.		Cost of materials.		Value of products.		Value added by the industry.	
	1920.	1921.	1920.	1921.	1920.	1921.	1920.	1921.
			$	$	$	$	$	$
General construction	1,548	1,501	40,424,944	31,155,060	126,991,068	85,224,331	86,566,124	54,069,271
Electrical contracting	284	336	2,012,679	2,327,454	4,918,639	5,054,203	2,905,960	2,726,749
Bridge building	17	14	6,904,251	5,971,417	19,432,732	12,048,774	12,528,481	6,077,357
Shipbuilding	82	38	20,952,217	5,986,029	54,825,696	19,509,059	33,873,479	13,523,030
Total	**1,931**	**1,889**	**70,294,091**	**45,439,960**	**206,168,135**	**121,836,367**	**135,874,044**	**76,396,407**

2.—Employees and Salaries and Wages disbursed in the Construction Industries, as reported to the Industrial Census, 1920 and 1921.

Industries.	Number of salaried employees.		Salaries.		Number of wage earners.		Wages.	
	1920.	1921.	1920.	1921.	1920.	1921.	1920.	1921.
			$	$			$	$
General construction	2,435	2,434	4,703,015	4,334,658	32,565	26,583	40,163,504	30,652,227
Electrical contracting	229	–	338,312	–	1,146	1,278	1,354,604	1,507,625
Bridge building	687	456	1,442,770	1,020,564	2,349	1,576	3,526,988	2,279,097
Shipbuilding	1,234	451	2,434,947	1,164,425	13,613	5,293	18,776,607	7,316,737
Total	**4,585**	**3,341**	**8,919,044**	**6,519,647**	**49,673**	**34,730**	**63,821,703**	**41,755,686**

In the course of the census of industry, returns were received regarding the 1921 operations of 1,501 general contractors engaged in building and general construction. The value of the contracts executed by these firms was $85,224,331. The value of the contracts completed by their sub-contractors was $20,809,040. The total value of the contracts completed by the 1,501 concerns and their sub-contractors was $106,033,371. The gross and net values of the contracts completed in four branches of the construction industry are given in Table 1, while the nature and the value of the work performed by the general contractors and their sub-contractors on the structures and works in question is given in detail in Table 3.

3.—Value of General Construction completed, by Classes of Work, 1921.

Classes of Works.	Value of works carried out on		
	New construction.	Alteration maintenance and repairs.	Total.
	$	$	$
Buildings—			
Private premises, residential	14,988,676	5,135,187	20,123,863
Private premises, trade, business, etc	21,092,377	3,586,369	24,678,746
Public premises, municipal and government	15,898,768	718,080	16,616,848
Places of public worship and buildings connected therewith	2,045,551	382,492	2,428,043
Construction, other than buildings—			
Highways and bridges, including roads, streets, walks and surface drains	14,492,107	1,175,369	15,667,476
Sewers and sewage disposal works	1,819,840	249,459	2,069,299
Tunnels, subways, culverts	211,678	1,200	212,878
Public conveniences, baths, play grounds, etc	107,669	90	107,759
Harbours and Docks—			
Harbours, wharves, piers and jetties	3,488,643	182,410	3,671,053
Docks, wet and dry	1,933,392	36,467	1,969,859
Canals and waterways	3,372,819	16,896	3,389,715
Dredging	1,564,199	249,121	1,813,320
River and sea walls, embankments, etc	304,182	3,393	307,575
Miscellaneous—			
Waterworks, reservoirs (mains and service)	2,186,006	9,657	2,195,663
Hydraulic works (mains and service)	662,780	1,000	663,780
Gas works (mains and service)	9,300	6,776	16,076
Land drainage works	683,610	17,995	701,605
Irrigation works	217,203	5,900	223,103
Mine shafts and adits	3,700	2,000	5,700
Electric lines and works, telephones, etc	459,145	68,735	527,880
Railway construction	3,715,768	1,040,593	4,756,361
All other works	3,106,275	780,494	3,886,769
Total value of work done	**92,363,688**	**13,669,683**	**106,033,371**

Construction in Transportation and Public Utility Industries.—The expenditure for construction by the transportation and public utility systems is incorporated in their general maintenance and structural accounts. The maintenance of way and structures account of the steam railways in 1922 totalled $79,887,565 as compared with $88,268,355 in 1921. There were 495 miles of new lines opened for operations during 1922, 267 miles completed but not opened for traffic, and 1,115 miles under construction. The total mileage, inclusive of all tracks, in 1922 was 52,273 as compared with 52,155 in 1921, a net increase of 118 miles. The expenditure of electric railways on maintenance of way and structures account increased from $3,721,603 in 1921 to $3,877,482 in 1922. The length of their main line increased from 2,186·95 miles to 2,237·82 or by 50·87 miles.

As for the growth of the telephone systems of Canada, the pole line mileage increased from 178,093 in 1921 to 184,147 in 1922 and the wire mileage from 2,268,271 to 2,396,805 in the same period. The property and equipment account was $158,678,229 in 1921 and $167,332,932 in 1922.

The pole line mileage of the telegraph systems increased from 52,784 in 1921 to 53,096 in 1922, and the wire mileage, which was 250,802 in 1921, increased by 11,541 in the following year. The line and equipment account was $1,409,728 in 1921 and $1,507,016 in 1922.

Contracts awarded.—The total value of contracts for construction awarded in Canada during the calendar years 1918 to 1923 inclusive, according to the compilation of the MacLean Building Reports, Ltd., is given in Table 4.

4.—Value of Construction Contracts awarded in Canada, 1918-1923, according to the compilation of MacLean Building Reports, Ltd.

Distribution.	1918.	1919.	1920.	1921.	1922.	1923.
Geographical Division.						
Maritime	23,180,300	18,772,600	21,395,000	9,288,900	11,154,000	8,749,400
Ontario	33,385,200	87,356,800	108,120,800	113,855,000	166,628,000	156,151,800
Quebec	23,641,700	55,277,800	54,904,600	61,337,500	103,291,800	102,569,800
Western	19,634,900	28,621,100	78,185,100	55,651,900	50,770,000	46,783,300
Type of Building.						
Residential	14,661,800	47,015,100	54,891,100	76,655,400	104,201,500	97,645,200
Business	26,196,800	59,606,400	86,073,200	84,721,700	81,385,700	80,436,800
Industrial	38,975,200	57,091,300	64,625,900	16,503,700	25,755,800	27,022,000
Engineering	20,008,300	26,315,500	50,015,300	62,252,500	120,500,800	109,150,300
Total	**99,842,100**	**190,028,300**	**255,605,500**	**240,133,300**	**331,843,800**[1]	**314,254,300**

[1]Total revised to include final returns as to cost of road construction during 1922.

Building Permits.—The anticipated value of construction in 35 Canadian cities, as indicated by their building permits, is shown in Table 5 for the years 1918 to 1923 inclusive. These cities had in 1921 a total population of 2,532,193, or about 28·8 p.c. of the total population of Canada. In 1922 the building permits were $122,655,581 as against a total $331,843,800 for Canada as a whole, or approximately 37 p.c. of the total estimated building.

5.—Values of Building Permits taken out in 35 Cities for the calendar years 1918-1923.

City.	1918.	1919.	1920.	1921.	1922.	1923.
	$	$	$	$	$	$
Nova Scotia—						
Halifax	2,866,852	5,194,805	3,421,379	2,199,398	1,752,632	378,699
Sydney	428,783	703,531	886,937	556,813	604,847	319,162
New Brunswick—						
Moncton	147,425	2,132,176	1,201,673	699,520	1,037,942	385,461
St. John	351,323	542,540	1,035,300	574,500	707,100	358,500
Quebec—						
Montreal—Maisonneuve	4,882,873	10,033,901	14,067,609	21,291,273	21,132,586	27,125,863
Quebec	904,375	2,134,219	2,301,480	3,695,397	5,397,566	4,786,933
Sherbrooke	150,920	873,150	3,265,538	753,900	712,000	732,100
Three Rivers	638,975	1,242,450	845,975	1,286,740	1,193,650	780,735
Westmount	275,211	883,131	1,179,890	1,576,293	1,770,032	1,933,232
Ontario—						
Brantford	761,500	1,173,580	798,073	404,445	465,420	615,686
Fort William	535,615	627,930	1,045,160	893,050	1,446,685	1,425,130
Guelph	83,044	603,259	494,158	433,257	964,808	571,484
Hamilton	2,472,254	5,087,462	4,340,220	4,639,450	4,928,465	5,452,930
Kingston	318,943	657,679	494,736	591,515	701,495	649,233
Kitchener	226,062	1,176,962	1,277,595	932,050	2,461,321	1,893,892
London	877,660	2,455,170	2,146,305	2,527,510	2,605,630	3,261,065
Ottawa	2,635,612	3,252,322	3,305,172	2,716,409	5,021,782	3,521,817
Peterborough	241,251	196,368	939,700	541,754	439,154	295,798
Port Arthur	610,527	1,708,845	216,350	113,509	1,167,429	2,640,321
Stratford	89,786	278,888	440,782	276,089	700,527	509,272
St. Catharines	465,727	861,636	830,632	776,360	1,290,576	806,310
St. Thomas	53,395	285,525	258,821	113,640	221,964	334,239
Toronto	8,535,331	19,617,838	25,737,063	23,878,246	35,237,925	30,609,227
Windsor	570,305	2,601,370	4,850,310	5,123,110	4,143,495	4,725,034
Manitoba—						
Brandon	99,022	98,541	412,829	749,190	225,029	183,034
Winnipeg	2,050,650	2,948,000	8,370,150	5,580,400	6,875,750	4,484,100
Saskatchewan—						
Moose Jaw	566,575	590,895	1,533,095	500,177	379,180	289,398
Regina	1,006,000	1,699,020	2,597,920	2,160,038	1,784,124	1,264,030
Saskatoon	604,715	1,404,590	1,150,585	774,466	1,818,909	852,548
Alberta—						
Calgary	1,196,800	2,212,000	2,906,100	2,298,800	3,102,700	821,840
Edmonton	351,470	931,346	3,231,955	1,563,696	2,338,109	1,488,670
British Columbia—						
New Westminster	108,300	166,282	319,109	264,870	332,050	350,848
Vancouver	1,450,229	2,271,411	3,569,656	3,045,132	8,661,695	6,277,574
Victoria	289,760	466,591	1,207,572	977,167	1,033,004	1,050,160
Total 35 Cities	**36,838,270**	**77,113,413**	**100,679,839**	**94,508,164**	**122,655,581**	**111,174,325**

VIII.—TRADE AND COMMERCE.

This section of the Canada Year Book is divided broadly into two sub-sections dealing with external and internal trade respectively. The first of these commences with a short history of Canadian external trade, the Canadian tariff, and recent developments in external trade. This is followed by 9 tables showing the historical development of Canadian external trade, and these again by numerous tables constituting a study of current external trade for post-war fiscal years, analysing exports and imports by groups, by articles, by degree of manufacture, by purpose for which commodities are used, and by countries of shipment or of destination. In view of the specially close trade relations between Canada and the West Indies, whose products are in so many cases complementary to our own, the sub-section continues with a historical and "current trend" study of our West Indian trade, and concludes with tables compiled from British and United States trade reports, showing for recent years the agricultural commodities supplied by various competing countries to the great world-market of the United Kingdom, and the agricultural commodities exported from the United States.

The sub-section on Internal Trade commences with an analysis of grain trade statistics, followed by a treatment of the marketing of live stock and animal products. Statistics of commodities in cold storage are given, together with figures of the coal trade, and the sub-section is brought to a conclusion by a statistical treatment of bounties, patents, copyrights and trade marks.

I.—EXTERNAL TRADE.

1.—Historical Sketch of External Trade and Tariffs.

In the early history of the American continent each of the different European nations establishing settlements in the New World endeavoured to monopolize the commerce of its colonies, prohibited the ships of other nations from resorting to them, and prohibited its colonials from importing European goods from other countries, generally granting them, however, preferential treatment in its own market. Under these circumstances the colonial wars in America were carried on, by governments permeated by the mercantile spirit, for "ships, colonies and commerce." Owing to this fact, wars resulting in the transfer of colonies from one European power to another involved great economic as well as political changes in the community so transferred. The traders who had previously controlled the trade between the colonial power and its colony found their occupations gone, while new traders from the conquering state arrived to take over the import and export trade, which thereafter flowed in new channels, perhaps no more artificial than those which had previously existed.

Throughout the earlier part of the French *régime* in Canada the foreign trade of the colony was in the hands of the monopolistic chartered companies, of which the Company of One Hundred Associates was the most notable. When its monopoly was cancelled in 1663, the foreign trade of Canada still remained a preserve of the merchants of Old France. Upon the conquest of the country by the British, the French merchants who had their offices in Quebec and Montreal for the most part returned to France, and the trade of the colony fell into the hands of the traders from England, Scotland and New England, who had swarmed into the country at the heels of the invading armies. Some of their descendants are still among the leaders in Canadian import and export trade.

For the first half century of British rule, Canadian commerce was carried on almost exclusively with or through the United Kingdom, the merchants of New England complaining, after the American Revolution, of being shut out from the Canadian trade. The geographical juxtaposition of the United States to British North America was, however, a factor which could not permanently be ignored. Smuggling became more and more prevalent as the process of settlement extended westward along the international boundary. In 1822 Great Britain made considerable trading concessions to United States traders. In 1846 she abolished the preferential treatment which she had given to Canadian wheat, and by 1860 all vestige of preference to colonial products had disappeared from the British tariff. As a consequence the colonies, which, like Canada, were by this time enjoying responsible government, could not any longer be refused the right to control their own commercial policy—a fact which was emphasized in an important report prepared in 1859 by the Minister of Finance, Sir A. T. Galt, and forwarded to the British Government. This report declared that the responsibility of the Canadian Government must be to the Canadian people, more especially in matters of taxation, (the greater part of the revenue being raised by customs duties), and that the Canadian Government must affirm the right of the Canadian Parliament to adjust the taxation of the people in the way it deemed best, even if this should happen to meet with the disapproval of the British Ministry. This doctrine remained unchallenged by the British Government, and coming at a time when all important parties in Great Britain had accepted free trade as a *fait accompli*, it facilitated the setting up of a protective tariff in Canada, designed to secure the establishment in Canada of manufacturing industries at a time when British opinion desired that the colonies should concentrate their attention on the production of food and raw materials, importing from Great Britain the manufactured commodities which they required.

The immediate effect of Confederation was to abolish the tariff barriers which existed between the provinces entering the Dominion. As the area of Canada increased until, except for Newfoundland and Labrador, it became conterminous with British North America, the area of internal free trade was thereby extended, while protection against outside competition was maintained. The tariff was the same against all countries, British or non-British, until April, 1897 when Canada adopted what was called a "reciprocal" tariff, one-eighth lower than the general. This "reciprocal" tariff was at once applied to the United Kingdom and afterwards to New South Wales and to British India, while Belgium and Germany, in virtue of their trade treaties with Great Britain, were also admitted to the benefits of the "reciprocal" tariff, together with Argentina, Austria-Hungary, Bolivia, Colombia, Denmark, Persia, Russia, Sweden, Switzerland, Tunis and Venezuela, on account of most-favoured-nation treaties between these countries and Great Britain, and France and her colonies in consequence of the Franco-Canadian treaty of 1893. A little later the "reciprocal" tariff was extended to the Netherlands, Japan, Siberia, Morocco, Salvador, South African Republic, Tonga, and Spain, also under most-favoured-nation treaties between these countries and the United Kingdom.

The numerous concessions mentioned above were, however, of a merely temporary character, ceasing to exist in 1898 as a consequence of the denunciation by Great Britain of her most-favoured-nation treaties with Germany and Belgium. This left Canada free to confine her lower tariff rates to the United Kingdom and to sister Dominions and colonies. A British preferential tariff, consisting at first of a remission of 25 p.c. of the duty ordinarily paid (Aug. 1, 1898), and later of a remission of 33⅓ p.c. of the ordinary rate of duty (July 1, 1900) was established. This method

of preference was abandoned in 1904 for a specially low rate of duty on almost all imported dutiable commodities.

Customs Tariff of 1907.—In 1907 a new customs tariff was introduced, establishing three scales of duties, British preferential (the lowest), intermediate and general, the intermediate tariff being set up as a basis for negotiation with foreign countries in the interest of Canadian trade. This tariff of 1907 is still in operation, with modifications. Under it, the British preferential tariff applies in 1923 to nearly the whole of the British Empire except Australia and Newfoundland, while to the British West Indies, under an agreement of June, 1920, rates of duties are granted even lower than those of the ordinary preferential tariff—in nearly all cases a remission of 50 p.c. of the duty ordinarily charged. The regular British preference was further increased in 1923 (13-14 Geo. V., c. 42) by a discount of 10 p.c. of the amount of duty computed under the British preference tariff, when goods paying 15 p.c. duty or over are conveyed without transhipment from a port of a country enjoying the British preferential tariff into a sea or river port of Canada.

The intermediate tariff applied in 1923 to the products of the following countries: France, her colonies and protectorates, Belgium, Italy and the Netherlands (all these under special Treaties); Argentine Republic, Colombia, Denmark, Japan, Norway, Russia, Spain, Sweden, Switzerland and Venezuela (under reciprocal most favoured nation clause treatment).

The general tariff is in force with respect to the products of all other foreign countries. There is also in the Canadian customs tariff an anti-dumping clause, providing that in the case of imported articles of a kind made or produced in Canada, if the export or selling price to the Canadian importer is less than the fair market value in the country whence imported, there shall be levied, in addition to the duties otherwise payable, a special duty according to the difference between the selling price for export and the fair market value for home consumption, but such special duty shall not exceed 15 p.c. *ad valorem*, nor be levied on goods when the normal duties are 50 p.c. *ad valorem*, nor on goods subject to excise duties.

Drawbacks of 99 p.c. of duties paid on imported materials are allowed by the customs laws and regulations in cases where articles manufactured from such materials are afterwards exported.

New commercial treaties with France (including her colonies and protectorates) and Italy were approved at the 1923 session of Parliament (13-14 Geo. V., c. 14, c. 17).

Surtax.—In 1903, the Customs Tariff Act of 1897 was amended to provide for a surtax of one-third of the duty on goods the product of any foreign country which treats imports from Canada less favourably than those from other countries. This surtax was at once applied against German goods, but was removed on March 1, 1910, when Canada obtained conventional rates of the German tariff on a specified list of goods. Under the Customs Tariff Act of 1914, the rate of surtax was left to be fixed in each case by the Governor in Council, but was not to exceed 20 p.c. *ad valorem*, The surtax may also be applied to goods ordinarily on the free list, but is not to exceed 20 p.c. *ad valorem*.

2.—The Commercial Intelligence Service.

The Commercial Intelligence Service, maintained by the Department of Trade and Commerce, is designed to further the interests of Canadian trade in other parts of the Empire and in foreign countries. To this end there are established throughout

the world offices administered by Trade Commissioners. These Trade Commissioners make periodical reports upon trade and financial conditions, variations in markets, and the current demand or opportunity for Canadian products. They also secure and forward to the Department in Ottawa specific inquiries for Canadian goods and in general exert their best efforts for the development and expansion of overseas markets. These reports, inquiries, etc., are summarized weekly in the Commercial Intelligence Journal, issued by the Commercial Intelligence Service at Ottawa, which is supplied at $1 per annum to Canadian manufacturers and others interested.

Canadian Government Trade Commissioners are stationed in the United Kingdom at London, Manchester, Liverpool, Bristol and Glasgow. They are also located at Bridgetown, Barbados; Kingston, Jamaica; Buenos Aires; Rio de Janeiro; Shanghai; Havana; Paris; Brussels; Hamburg; Copenhagen; Rotterdam; Milan; Kobe; Melbourne; Auckland, New Zealand; Cape Town; Calcutta; Singapore and New York. There are, in addition, Canadian Commercial Agents in Sydney, N.S.W., Christiania and Port of Spain, Trinidad. Under an arrangement made by the Minister of Trade and Commerce of the Dominion of Canada with the British Foreign Office, Canadian manufacturers, exporters and others interested in trade matters may secure information and advice from British commercial diplomatic officers and British Consuls in all countries in which Canada is not represented by her own Commercial Intelligence Service.

3.—Statistics of External Trade.

In the consideration of the foreign trade statistics of Canada, certain facts should be borne in mind. First, statistics are given since 1907 for the fiscal years ended March 31. Secondly, imports means always "imports for consumption"; this term does not necessarily imply that the goods have been actually consumed in Canada, but only that they have passed into the possession of the importer; the value given for goods imported is the fair market value thereof when sold for home consumption on the principal markets of the country whence and at the time when the goods were exported to Canada. Thirdly, the term "Canadian produce" includes all imported articles which have been changed in form or enhanced in value by further manufacture in Canada, such as sugar refined in Canada from imported raw sugar, flour ground from imported wheat, and articles constructed or manufactured from imported materials; the value of "Canadian produce" is its value at the time of exportation at the Canadian ports from which it is shipped. Fourthly, the term "foreign produce" applies to the exports of foreign goods which have previously been imported (re-exports); the value of "foreign produce" is the actual cost of the goods.

Historical Statistics.—A general view of the aggregate trade of Canada for the years from 1868 to 1923 is furnished in Table 1, giving the imports of merchandise for home consumption, dutiable and free, and the exports of Canadian and foreign produce, the total trade as here given being the aggregate of the two. Necessarily, some difficulties have been met in maintaining comparable statistics through such a length of time, one of the most serious of these arising through different methods adopted in dealing with exports of foreign produce. For example, the shrinkage in the exports of foreign produce between 1919 and 1922 has been due to change of statistical method rather than to actual diminution in value or volume of such goods exported. For the past two years, re-exports of foreign products from bonded ware-

houses have no longer been included in Canadian trade statistics either as imports or as exports, while the exports of foreign produce have, during this period, been composed of goods which had previously been entered as imports for home consumption. Such goods, therefore, are shown as debited to Canada when entering this country and should, therefore, be credited to Canada when re-exported. Consequently, in determining our visible balance of trade in Table **2**, it has been necessary to set off the total exports of the past two years against the imports for home consumption. The same table gives the *per capita* imports for home consumption and exports of Canadian produce since Confederation.

From Table **2** it will be observed that the so-called "balance of trade" has been against Canada (*i.e.*, the imports for home consumption have exceeded the exports of Canadian produce) in 44 years out of the 56 years since Confederation, and that this adverse balance reached its highest point in 1913, just before the war. After 1913, the unfavourable trade balance diminished, and in 1916, for the first time since 1898, it gave place to a favourable balance of trade, which continued down to 1920, but was replaced by a comparatively small adverse balance of trade in 1921 and a small favourable balance in 1922. For 1916, the exports of Canadian produce were 146·03 p.c., for 1917, 136·20 p.c., for 1918, 159·99 p.c., for 1919, 132·73 p.c. for 1920, 116·43 p.c., for 1921, 97·60 p.c., for 1922, 100·82 p.c. and for 1923, 117·80 p.c. of the imports for home consumption, exports of foreign produce having been included with domestic exports for the last two years, for reasons stated above.

The values of coin and bullion imported and exported, these movements from 1914 on representing fiduciary transactions rather than trading exchanges, are shown in Table **3**. Amounts collected in export duties from 1868 to 1892, and in import duties from 1868 to 1923, are stated by years in Table **4**. Tables **5** and **6** give the statistics of our exports of Canadian produce and our imports for home consumption respectively, figures being furnished of our trade with the United Kingdom, United States and other countries since 1868. These figures show the overwhelming predominance of the two great English-speaking countries in our foreign trade; in the fiscal year ended March 31, 1923, for example, 80·3 p.c. of our exports of domestic produce was shipped to these two countries, which in the same year together provided 85·0 p.c. of our imports for home consumption. Tables **7** and **8** show respectively by years the percentage proportions of imports from the United Kingdom and the United States to totals of dutiable and free imports since 1901, and the *ad valorem* rates of duty collected on imports from these countries from 1868.

Importations of important raw materials used in Canadian manufacturing industries are given in Table **9** for the years 1902 to 1923.

Current Trade Statistics.—In Tables **10** and **11** will be found a summary analysis of the trade of Canada for the fiscal years from 1920 to 1923. In the last of these years the total imports for home consumption and exports of merchandise amounted to $1,747,760,880, including imports for home consumption, $802,465,043, exports of Canadian produce, $931,451,443 and exports of foreign produce, $13,844,-394. Or, excluding exports of foreign produce, the imports for home consumption and the exports of Canadian merchandise (sometimes called the "special" trade) amounted to $1,733,916,486, as compared with special trade of $1,488,045,012 in 1922, an increase of $245,871,474, 16·5 p.c. The exports of Canadian produce showed a much larger increase than the imports, $191,210,763 as compared with $54,660,711, or 25·8 p.c. as compared with 7·3 p.c. As compared with the fiscal year 1921, the total "special" trade shows a decrease of $695,406,097, $437,693,839

in imports and $257,712,258 in exports, but since the fiscal year ended March, 1921, was the year of "peak" prices, the decline was one of mere values rather than of quantities of commodities entering into the trade of the country. In fact, a list of commodities imported and exported, published in the Report of the Department of Trade and Commerce for 1923, shows that the volume of various important commodities imported and exported, was greater in 1923 than in 1921.

Balance of Trade.—As will have been noted from the above, the visible balance of trade was considerably in favour of Canada during the fiscal year ended March 1923, $142,830,794 as compared with $6,122,677 in 1922, and with an unfavourable balance of $29,730,763 in 1921. While the favourable balances of trade shown during the war years went to maintain our soldiers in the field and were of little net advantage to the country, those of the post-war years indicate clearly an improvement in the commercial and financial position of the Dominion among the nations of the world.

Comparative Growth of Canadian Trade.[1]—The great advance in Canada's trading position as compared with the pre-war period may be illustrated by a comparison of the trade of the leading commercial countries of the world for the calendar years 1913 and 1922. As regards exports, in 1913, Canada occupied tenth place among the countries of the world; by 1922 she had climbed to fifth place, surpassed only by the four great industrial nations, the United Kingdom, the United States, France and Germany. The figures follow:—

Calendar Year 1913.		Calendar Year 1922.	
Countries.	$	Countries.	$
United Kingdom	2,556,234,000	United States	3,765,192,000
United States	2,448,284,000	United Kingdom	3,278,259,000
Germany	2,402,967,000	France	1,713,285,000
France	1,327,882,000	Germany	944,859,000
Netherlands	1,239,368,000	**Canada**	**884,363,000**
British India	781,947,000	British India	821,940,000
Belgium	701,475,000	Japan	777,561,000
Italy	484,746,000	Australia	548,894,000
Argentina	465,582,000	Netherlands	477,623,000
Canada	**436,218,000**	Belgium	471,436,000

On the other hand, among the leading importing countries of the world, Canada stood eighth in 1922, in the same relative position as in 1913. In the earlier year, "boom" conditions prevailed, and the country was importing capital on a great scale for its railway and general development. The latter year was, on the whole, a year of depression.

Calendar Year 1913.		Calendar Year 1922.	
Countries.	$	Countries.	$
United Kingdom	3,207,951,000	United Kingdom	4,095,638,000
Germany	2,563,331,000	United States	3,045,809,000
United States	1,756,863,000	France	1,983,750,000
France	1,625,317,000	Germany	1,475,695,000
Netherlands	1,575,036,000	Japan	897,316,000
Belgium	894,865,000	Netherlands	792,593,000
Italy	703,608,000	Italy	765,893,000
Canada	**659,064,000**	**Canada**	**762,339,000**

[1] See Report of the Department of Trade and Commerce for 1923, pp. 6-8.

In export trade *per capita*, Canada stood third in 1922 among the principal exporting countries, as compared with seventh in 1913. In the latter year the Dominion was surpassed only by New Zealand and Australia. The figures follow:—

Calendar Year 1913.		Calendar Year 1922.	
Countries.	$ cts.	Countries.	$ cts.
Netherlands	201 71	New Zealand	153 10
New Zealand	97 01	Australia	100 96
Belgium	92 55	**Canada**	**100 63**
Australia	74 78	Switzerland	87 44
Switzerland	70 25	Denmark	76 40
Denmark	61 55	Argentina	74 55
Canada	**57 95**	Netherlands	69 82
United Kingdom	55 52	United Kingdom	69 36
Argentina	53 61	Belgium	63 02
Sweden	39 05	Sweden	52 31
Germany	36 22	France	43 70
France	33 53	Union of South Africa	38 13
United States	25 23	United States	34 39

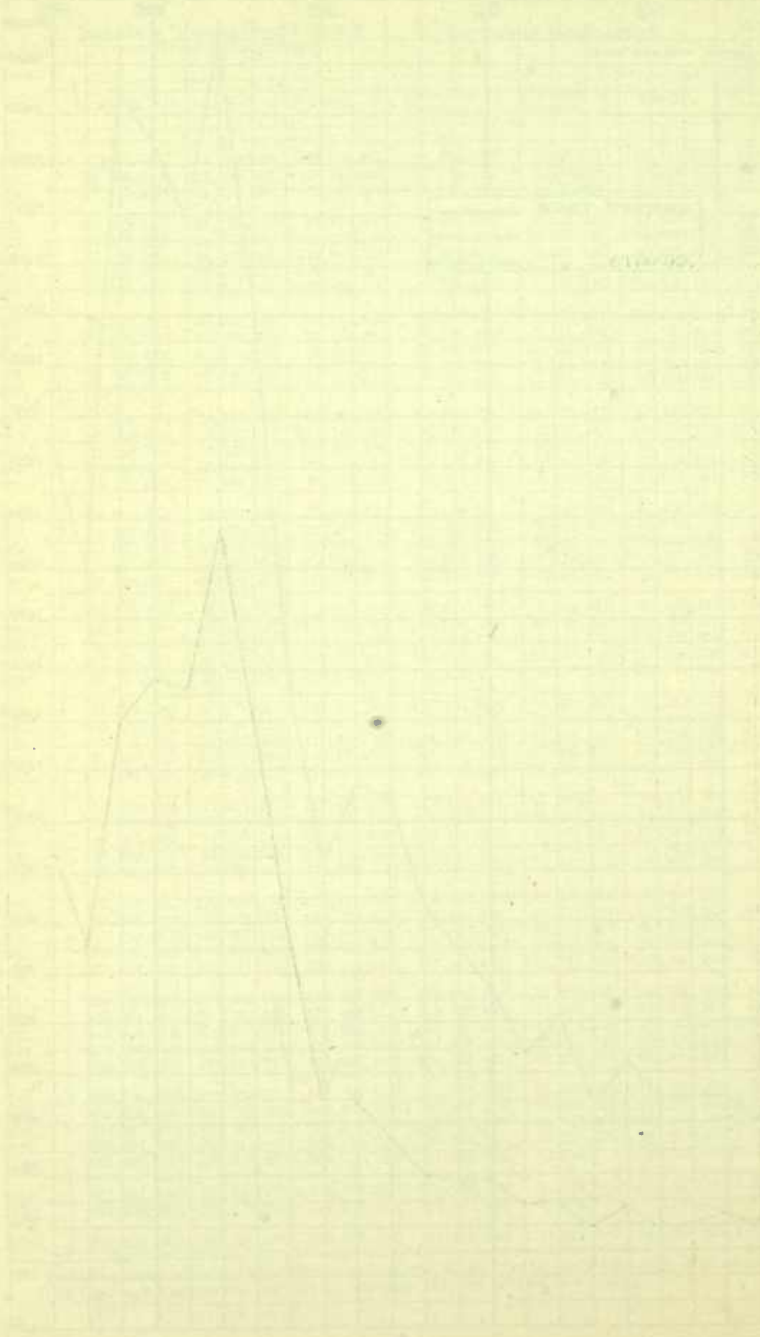
Current Trend Tables.—Tables **12** and **13** are the great detailed tables of exports and imports, published, as in former years, for the last four fiscal years. In Tables **14, 15** and **16,** the recent external trade of Canada is analyzed according to main classes, degree of manufacture and purpose for which commodities are used. Imports and customs duties collected are shown by provinces and ports of entry in Table **17,** imports under different tariffs in Table **18,** and our external trade is analyzed by countries in Tables **19** to **21.** Values of merchandise imported from and exported to other countries *via* the United States are given in Table **22.** The historical and recent trend of Canadian trade with the British and foreign West Indies is covered in Tables **23** to **25.** Tables **26** and **27** show respectively British imports and United States exports of food commodities, and are included for the purpose of giving our traders information concerning the imports of their great customer and the exports of their great competitor.

1.—Aggregate External Trade of Canada, 1868-1923.

Fiscal Year.	Imports of Merchandise Entered for Home Consumption.			Exports of Merchandise.			Total of Imports for Home Consumption and Exports (Merchandise.)
	Dutiable.	Free.	Total.	Canadian Produce.[1]	Foreign Produce.	Total.	
	$	$	$	$	$	$	$
1868.....	43,655,696	23,434,463	67,090,159	48,504,899	4,196,821	52,701,720	119,791,879
1869.....	41,069,342	22,085,599	63,154,941	52,400,772	3,855,801	56,256,573	119,411,514
1870.....	45,127,422	21,774,652	66,902,074	59,043,590	6,527,622	65,571,212	132,473,286
1871.....	60,094,362	24,120,026	84,214,388	57,630,024	9,853,244	67,483,268	151,697,656
1872.....	68,276,157	36,679,210	104,955,367	65,831,083	12,798,182	78,629,265	183,584,632
1873.....	71,198,176	53,310,953	124,509,129	76,538,025	9,405,910	85,943,935	210,453,064
1874.....	76,232,530	46,948,357	123,180,887	76,741,997	10,614,096	87,356,093	210,536,980
1875.....	78,138,511	39,270,057	117,408,568	69,709,823	7,137,319	76,847,142	194,255,710
1876.....	60,238,297	32,274,810	92,513,107	72,491,437	7,234,961	79,726,398	172,239,505
1877.....	60,916,770	33,209,624	94,126,394	68,030,546	7,111,108	75,141,654	169,268,048
1878.....	59,773,039	30,622,812	90,395,851	67,989,800	11,164,878	79,154,678	169,550,529
1879.....	55,426,836	23,275,683	78,702,519	62,431,025	8,355,644	70,786,669	149,489,888
1880.....	54,182,967	15,717,575	69,900,542	72,899,697	13,240,006	86,139,703	156,040,245
1881.....	71,620,725	18,867,604	90,488,329	83,944,701	13,375,117	97,319,818	187,808,147
1882.....	85,757,433	25,387,751	111,145,184	94,137,657	7,628,453	101,766,110	212,911,294
1883.....	91,588,339	30,273,157	121,861,496	87,702,431	9,751,773	97,454,204	219,315,700
1884.....	80,010,498	25,962,480	105,972,978	79,833,098	9,389,106	89,222,204	195,195,182
1885.....	73,269,618	26,486,157	99,755,775	79,131,735	8,079,646	87,211,381	186,967,156
1886.....	70,658,819	25,333,318	95,992,137	77,756,704	7,438,079	85,194,783	181,186,920
1887.....	78,120,679	26,986,531	105,107,210	80,969,909	8,549,333	89,510,242	194,617,452
1888.....	69,645,824	31,025,804	100,671,628	81,382,072	8,803,394	90,185,466	190,857,094
1889.....	74,475,139	34,623,057	109,098,196	80,272,456	6,938,455	87,210,911	196,309,107
1890.....	77,106,286	34,576,287	111,682,573	85,257,586	9,051,781	94,309,367	205,991,940
1891.....	74,536,036	36,997,918	111,533,954	88,671,738	8,798,631	97,470,369	209,004,323
1892.....	69,160,737	45,999,676	115,160,413	99,032,466	13,121,791	112,154,257	227,314,670
1893.....	69,873,571	45,297,259	115,170,830	105,488,798	8,941,856	114,430,654	229,601,484
1894.....	62,779,182	46,291,729	109,070,911	103,851,764	11,833,805	115,685,569	224,756,480
1895.....	58,557,655	42,118,236	100,675,891	102,828,441	6,485,043	109,313,484	209,989,375
1896.....	67,239,759	38,121,402	105,361,161	109,707,805	6,606,738	116,314,543	221,675,704
1897.....	66,220,765	40,397,062	106,617,827	123,632,540	10,825,163	134,457,703	241,075,530
1898.....	74,625,088	51,682,074	126,307,162	144,548,662	14,980,883	159,529,545	285,836,707
1899.....	89,433,172	59,989,244	149,422,416	137,360,792	17,520,088	154,880,880	304,303,296
1900.....	104,346,795	68,304,881	172,651,676	168,972,301	14,265,254	183,237,555	355,889,231
1901.....	105,969,756	71,961,163	177,930,919	177,431,386	17,077,757	194,509,143	372,440,062
1902.....	118,657,496	78,080,308	196,737,804	196,019,763	13,951,101	209,970,864	406,708,668
1903.....	136,796,065	88,298,744	225,094,809	214,401,674	10,828,087	225,229,761	450,324,570
1904.....	148,909,576	94,999,839	243,909,415	198,414,439	12,641,239	211,055,678	454,965,093
1905.....	150,928,787	101,035,427	251,964,214	190,854,946	10,617,115	201,472,061	453,436,275
1906.....	173,046,109	110,694,171	283,740,280	235,483,956	11,173,846	246,657,802	530,398,082
1907[2].....	152,065,529	98,160,306	250,225,835	180,545,306	11,541,927	192,087,233	442,313,068
1908.....	218,160,047	134,380,832	352,540,879	246,960,968	16,407,984	263,368,952	615,909,831
1909.....	175,014,160	113,580,036	288,594,196	242,603,584	17,318,782	259,922,366	548,516,562
1910.....	227,264,346	143,053,853	370,318,199	279,247,551	19,516,442	298,763,993	669,082,192
1911.....	282,723,812	170,000,791	452,724,603	274,316,553	15,683,657	290,000,210	742,724,813
1912.....	335,304,060	187,100,615	522,404,675	290,223,857	17,492,294	307,716,151	830,120,826
1913.....	441,606,885	229,600,349	671,207,234	355,754,600	21,313,755	377,068,355	1,048,275,589
1914.....	410,258,744	208,935,254	619,193,998	431,588,439	23,848,785	455,437,224	1,074,631,222
1915.....	279,792,195	176,163,713	455,955,908	409,418,836	52,023,673	461,442,509	917,398,417
1916.....	289,366,527	218,834,607	508,201,134	741,610,638	37,689,432	779,300,070	1,287,501,204
1917.....	461,733,609	384,717,269	846,450,878	1,151,375,768	27,835,332	1,179,211,100	2,025,661,978
1918.....	542,341,522	421,191,056	963,532,578	1,540,027,788	46,142,004	1,586,169,792	2,549,702,370
1919.....	526,494,658	393,217,047	919,711,705	1,216,443,806	52,321,479	1,268,765,285	2,188,476,990
1920.....	693,655,165	370,872,958	1,064,528,123	1,239,492,098	47,166,611	1,286,658,709	2,351,186,832
1921.....	847,561,406	392,597,476	1,240,158,882	1,189,163,701	21,264,418	1,210,428,119	2,450,587,001
1922.....	495,626,323	252,178,009	747,804,332	740,240,680	13,686,329	753,927,009	1,501,731,341
1923[3].....	537,214,581	265,250,462	802,465,043	931,451,443	13,844,394	945,295,837	1,747,760,880

[1] Including exports to the United States estimated "short" in the years 1868-1900. [2] Nine months.
[3] The figures of imports and exports for the year 1923 are subject to revision.

NOTE.—Figures at the sides of the chart are in millions of dollars, Each vertical line represents one year from 1901 to 1923, and each horizontal line represents $50,000,000



2.—Ratio of Exports to Imports and Value per capita of Exports, Imports and Total Trade, 1868-1923.

Fiscal Year.	Excess of Imports entered for Consumption over Exports of Canadian Produce.	Excess of Exports of Canadian Produce over Imports entered for Consumption.	Percentage Rate of Exports of Canadian Produce to Imports entered for Consumption.	Estimated Population.	Value per capita of—		
					Exports Canadian Produce.	Imports.	Total Trade.
	$	$	p.c.		$ cts.	$ cts.	$ cts.
1868	18,585,260	–	72·30	3,372,000	14·38	19·90	34·28
1869	10,754,169	–	82·97	3,413,000	15·35	18·50	33·85
1870	7,858,484	–	89·34	3,454,000	17·09	19·37	36·46
1871	26,584,364	–	68·43	3,518,000	16·38	23·94	40·32
1872	39,124,284	–	62·72	3,611,000	18·23	29·06	47·29
1873	47,971,104	–	61·47	3,668,000	20·87	33·94	54·81
1874	46,439,890	–	62·30	3,825,000	20·06	32·20	52·26
1875	47,698,745	–	59·37	3,887,000	17·93	30·21	48·14
1876	20,021,670	–	78·36	3,949,000	18·36	23·43	41·79
1877	26,095,848	–	72·28	4,013,000	16·97	23·45	40·42
1878	22,406,051	–	75·21	4,079,000	16·67	22·16	38·83
1879	16,271,494	–	79·32	4,146,000	15·06	18·98	34·04
1880	–	2,999,155	104·29	4,215,000	17·29	16·58	33·87
1881	6,543,628	–	92·77	4,337,000	19·36	20·86	40·22
1882	17,007,527	–	84·70	4,384,000	21·47	25·35	46·82
1883	34,159,065	–	71,97	4,433,000	19·78	27·49	47·27
1884	26,139,880	–	75·33	4,485,000	17·80	23·63	41·43
1885	20,624,040	–	79·33	4,539,000	17·43	21·98	39·41
1886	18,235,433	–	81·00	4,589,000	16·94	20·92	37·86
1887	24,146,301	–	77·03	4,638,000	17·46	22·66	40·12
1888	19,289,556	–	80·84	4,688,000	17·36	21·47	38·83
1889	28,825,740	–	73·58	4,740,000	16·94	23·02	39·96
1890	26,424,987	–	76·34	4,793,000	17·79	23·30	41·09
1891	22,862,216	–	79·50	4,844,000	18·31	23·02	41·33
1892	16,127,947	–	86·00	4,889,000	20·26	23·55	43·81
1893	9,682,032	–	91·59	4,936,000	21·37	23·33	44·70
1894	5,219,147	–	95·21	4,984,000	20·84	21·88	42·72
1895	–	2,152,550	102·14	5,034,000	20·43	20·00	40·43
1896	–	4,346,644	104·13	5,086,000	21·57	20·72	42·29
1897	–	17,014,713	115·96	5,142,000	24·04	20·73	44·77
1898	–	18,241,500	114·44	5,199,000	27·80	24·29	52·09
1899	12,061,624	–	91·97	5,259,000	26·12	28·41	54·53
1900	3,679,375	–	97·95	5,322,000	31·75	32·44	64·19
1901	499,533	–	99·85	5,403,000	32·84	33·13	65·97
1902	718,041	–	99·77	5,532,000	35·43	35·56	70·99
1903	10,693,135	–	95,37	5,673,000	37·79	39·68	77·47
1904	45,494,976	–	81·45	5,825,000	34·06	41·87	75·93
1905	61,109,268	–	75·85	5,992,000	31·85	42·05	73·90
1906	48,256,324	–	83·13	6,171,000	38·16	45·98	84·14
1907[1]	69,680,529	–	72·29	6,302,000	28·65	39·70	68·35
1908	105,579,911	–	70·18	6,491,000	38·05	54·31	92·36
1909	45,990,612	–	84·17	6,695,000	36·24	43·10	79·34
1910	91,070,648	–	75·51	6,917,000	40·37	53·54	93·91
1911	178,408,050	–	60·72	7,206,643	38·06	62·82	100·88
1912	232,180,818	–	55·66	7,365,205	39·40	70·93	110·33
1913	315,452,634	–	53·09	7,527,208	47·26	89·17	136·43
1914	187,605,559	–	69·78	7,692,832	56·10	80·49	136·59
1915	46,537,072	–	89·89	7,862,078	52·07	57·99	110·06
1916	–	233,409,504	146,03	8,035,584	92·29	63·24	155·53
1917	–	304,924,890	136·20	8,180,160	140·75	103·48	244·23
1918	–	576,495,210	159·99	8,328,382	184,91	115·69	300·60
1919	–	296,732,101	132,73	8,478,546	143,47	108,48	251 95
1920	–	174,963,975	116·43	8,631,475	143·60	123·33	266·93
1921	29,730,763[2]	–	97·60[3]	8,788,483	135·31	141·11	276·42
1922	–	6,122,677[2]	100·82[3]	8,966,834	82·55	83·39	165·94
1923[4]	–	142,830,794[2]	117·80[3]	9,146,456	101·84	87·73	189·57

[1]Nine months.

[2]Excess of imports for home consumption over total exports, or of total exports over imports for home consumption. These amounts represent the true balance of trade, since for the last two years goods shown as foreign exports have previously been entered as imported for home consumption.

[3]Percentage of total exports to imports for home consumption.

[4]The figures for 1923 are subject to revision.

3.—Movement of Coin and Bullion, 1868-1918.

Fiscal Year.	Total Imports.	Exports.			Total Imports and Exports of Coin and Bullion.
		Canadian.	Foreign.	Total.	
	$	$	$	$	$
1868	4,895,147	4,866,168	–	4,866,168	9,761,315
1869	4,247,229	4,218,208	–	4,218,208	8,465,437
1870	4,335,529	8,002,278	–	8,002,278	12,337,807
1871	2,733,094	6,690,350	–	6,690,350	9,423,444
1872	2,753,749	4,010,398	–	4,010,398	6,764,147
1873	3,005,465	3,845,987	–	3,845,987	6,851,452
1874	4,223,282	1,995,835	–	1,995,835	6,219,117
1875	2,210,089	1,039,837	–	1,039,837	3,249,926
1876	2,220,111	1,240,037	–	1,240,037	3,460,148
1877	2,174,089	–	733,739	733,739	2,907,828
1878	803,726	–	168,989	168,989	972,715
1879	1,639,089	–	704,586	704,586	2,343,675
1880	1,881,807	–	1,771,755	1,771,755	3,653,562
1881	1,123,275	–	971,005	971,005	2,094,280
1882	1,503,743	–	371,093	371,093	1,874,836
1883	1,275,523	–	631,600	631,600	1,907,123
1884	2,207,666	–	2,184,292	2,184,292	4,391,958
1885	2,954,244	–	2,026,980	2,026,980	4,981,224
1886	3,610,557	–	56,531	56,531	3,667,088
1887	532,218	–	5,569	5,569	537,787
1888	2,175,472	–	17,534	17,534	2,193,006
1889	575,251	–	1,978,256	1,978,256	2,553,507
1890	1,083,011	–	2,439,782	2,439,782	3,522,793
1891	1,811,170	129,328	817,599	946,927	2,758,097
1892	1,818,530	306,447	1,502,671	1,809,118	3,627,648
1893	6,534,200	309,459	3,824,239	4,133,698	10,667,898
1894	4,023,072	310,006	1,529,374	1,839,380	5,862,452
1895	4,576,620	256,571	4,068,748	4,235,319	8,901,939
1896	5,226,319	207,532	4,491,777	4,699,309	9,925,628
1897	4,676,194	327,298	3,165,252	3,492,550	8,168,744
1898	4,390,844	1,045,723	3,577,415	4,623,138	9,013,982
1899	4,629,177	1,101,245	2,914,780	4,016,025	8,645,202
1900	8,152,640	1,670,068	6,987,100	8,657,168	16,809,808
1901	3,307,069	–	1,978,489	1,978,489	5,285,558
1902	6,053,791	–	1,669,422	1,669,422	7,723,213
1903	8,695,707	–	619,963	619,963	9,315,670
1904	7,554,917	–	2,465,557	2,465,557	10,020,474
1905	9,961,340	–	1,844,811	1,844,811	11,806,151
1906	6,670,527	–	9,928,828	9,928,828	16,549,355
1907 (9 mos.)	7,029,047	–	13,189,964	13,189,964	20,219,011
1908	5,887,737	–	16,637,654	16,637,654	22,525,391
1909	9,611,761	2	1,589,791	1,589,793	11,201,554
1910	5,514,817	–	2,594,536	2,594,536	8,109,353
1911	9,226,715	–	7,196,155	7,196,155	16,422,870
1912	25,077,515	–	7,601,099	7,601,099	32,678,614
1913	4,309,811	–	16,163,702	16,163,702	20,473,513
1914	14,498,451	1,219	23,559,485	23,560,704	38,059,155
1915	131,483,396	667	29,365,701	29,366,368	160,849,764
1916	33,876,227	315	103,572,117	103,572,432	137,448,659
1917	26,986,548	86,087	196,460,961	196,547,048	223,533,596
1918	11,290,341	290,281	3,201,122	3,491,403	14,781,744

NOTE.—Information as to imports and exports of coin and bullion in the fiscal years 1919 to 1923 is not available for publication. Up to 1919 "Silver bullion in bars, blocks, ingots, drops, sheets and plates, unmanufactured," was included in "coin and bullion," but since that time it is regarded as "merchandise." The figures from 1899 of the above table have been revised in accordance with the new arrangement.

4.—Duties collected on Exports, 1868-1892, and on Imports for Home Consumption, 1868-1923.

Fiscal Year.	Duties collected on Exports.	Duties collected on Imports.	Fiscal Year.	Duties collected on Exports.	Duties collected on Imports.
	$	$		$	$
1868	17,986	8,801,446	1881	8,141	18,492,645
1869	14,403	8,284,507	1882	8,810	21,700,028
1870	37,912	9,425,028	1883	9,756	23,162,553
1871	36,066	11,807,590	1884	8,515	20,156,448
1872	24,809	13,020,684	1885	12,305	19,121,254
1873	20,152	12,997,578	1886	20,726	19,427,398
1874	14,565	14,407,318	1887	31,397	22,438,309
1875	7,243	15,354,139	1888	21,772	22,187,869
1876	4,500	12,828,614	1889	42,207	23,742,317
1877	4,103	12,544,348	1890	93,674	23,921,234
1878	4,161	12,791,532	1891	64,803	23,416,266
1879	4,272	12,935,269	1892	108	20,550,474
1880	8,896	14,129,953			

Fiscal Year.	Duties collected on Imports.	Fiscal Year.	Duties collected on Imports.	Fiscal Year.	Duties collected on Imports.
	$		$		$
1893	21,161,711	1903	37,110,355	1913	115,063,688
1894	19,379,822	1904	40,954,349	1914	107,180,578
1895	17,887,269	1905	42,024,340	1915	79,205,910[1]
1896	20,219,037	1906	46,671,101	1916	103,940,101[1]
1897	19,891,997	1907 (9 months)	40,290,172	1917	147,631,455[1]
1898	22,157,788	1908	58,331,074	1918	161,595,629[1]
1899	25,734,229	1909	48,059,792	1919	158,046,334[1]
1900	28,889,110	1910	61,024,239	1920	187,524,182[1]
1901	29,106,980	1911	73,312,368	1921	179,667,683[1]
1902	32,425,532	1912	87,576,037	1922	121,487,394[1]
				1923	133,791,370[1]

[1] Includes war tax.

NOTE.—Duties on exports were not collected after the year 1892.

5.—Exports to the United Kingdom, to the United States and to other Countries of Merchandise, the Produce of Canada, 1868-1923.

Fiscal Year.	Exports to United Kingdom.	Per cent Can. Exports to U.K. to total Can. exports. (Mdse.)	Exports to United States.	Per cent Can. Exports to U.S. to total Can. exports. (Mdse.)	Exports to Other Countries.	Total Exports of Canadian Produce.
	$	p.c.	$	p.c.	$	$
1868	17,905,808	36·9	25,349,568	52·3	5,249,523	48,504,899
1869	20,486,389	39·1	26,717,656	51·0	5,196,727	52,400,772
1870	22,512,991	38·1	30,361,328	51·4	6,169,271	59,043,590
1871	21,733,556	37·7	29,164,358	50·6	6,732,110	57,630,024
1872	25,223,785	38·3	32,871,496	49·9	7,735,802	65,831,083
1873	31,402,234	41·0	36,714,144	48·0	8,421,647	76,538,025
1874	35,769,190	46·6	33,195,805	43·3	7,777,002	76,741,997
1875	34,199,134	49·1	27,992,748	40·0	7,607,941	69,709,823
1876	34,379,005	47·4	30,080,738	41·5	8,031,694	72,491,437
1877	35,491,671	52·2	24,326,332	35·8	8,212,543	68,030,546
1878	35,861,110	52·7	24,381,009	35·9	7,747,681	67,989,800
1879	29,393,424	47·1	25,491,356	40·8	7,546,245	62,431,025
1880	35,208,031	48·3	29,566,211	40·6	8,125,455	72,899,697
1881	42,637,219	50·8	34,038,431	40·5	7,269,051	83,944,701
1882	39,816,813	42·3	45,782,584	48·6	8,538,260	94,137,657
1883	39,538,067	45·1	39,513,225	45·1	8,651,139	87,702,431
1884	37,410,870	46·9	34,332,641	43·0	8,089,587	79,833,098
1885	36,479,051	46·1	35,566,810	44·9	7,085,874	79,131,735
1886	36,694,263	47·2	34,284,490	44·1	6,777,951	77,756,704
1887	38,714,331	47·8	35,269,922	43·6	6,976,656	80,960,909
1888	33,648,284	41·3	40,407,483	49·6	7,326,305	81,382,072
1889	33,504,281	41·7	39,519,940	49·2	7,248,235	80,272,456
1890	41,499,149	48·7	36,213,279	42·5	7,545,158	85,257,586
1891	43,243,784	48·8	37,743,430	42·6	7,684,524	88,671,738
1892	54,949,055	55·5	34,666,070	35·0	9,417,341	99,032,466
1893	58,409,606	55·4	37,296,110	35·4	9,783,082	105,488,798
1894	60,878,056	58·6	32,562,509	31·4	10,411,199	103,851,764
1895	57,903,564	56·3	35,603,863	34·6	9,321,014	102,828,441
1896	62,717,941	57·2	37,789,481	34·4	9,200,383	109,707,805
1897	69,533,852	56·2	43,664,187	35·3	10,434,501	123,632,540
1898	93,065,019	64·4	38,989,525	27·0	12,494,118	144,548,662
1899	85,113,681	62·0	39,326,485	29·0	12,920,626	137,360,792
1900	96,562,875	57·1	57,996,488	34·2	14,412,938	168,972,301
1901	92,857,525	52·3	67,983,673	38·3	16,590,188	177,431,386
1902	100,347,345	55·8	66,567,784	34·0	20,104,634	196,019,763
1903	125,199,980	58·4	67,766,367	31·6	21,435,327	214,401,674
1904	110,120,892	55·5	66,856,885	33·7	21,436,662	198,414,439
1905	97,114,867	50·9	70,426,765	36·9	23,313,314	190,854,946
1906	127,456,465	54·1	83,546,306	35·5	24,481,185	235,483,956
1907[1]	98,691,186	54·7	62,180,439	34·4	19,673,681	180,545,306
1908	126,194,124	51·1	90,814,871	36·8	29,951,973	246,960,968
1909	126,384,724	52·1	85,334,806	35·2	30,884,054	242,603,584
1910	139,482,945	50·0	104,199,675	37·3	35,564,931	279,247,551
1911	132,156,924	48·2	104,115,823	38·0	38,043,806	274,316,553
1912	147,240,413	50·7	102,041,222	35·2	40,942,222	290,223,857
1913	170,161,903	47·8	139,725,953	39·3	45,866,744	355,754,600
1914	215,253,969	49·9	163,372,825	37·9	52,961,645	431,588,439
1915	186,668,554	45·6	173,320,216	42·3	49,430,066	409,418,836
1916	451,852,399	60·9	201,106,488	27·1	88,651,751	741,610,638
1917	742,147,537	64·5	280,616,330	24·4	128,611,901	1,151,375,768
1918	845,480,069	54·9	417,233,287	27·0	277,314,432	1,540,027,788
1919	540,750,977	44·5	454,873,170	37·4	220,819,659	1,216,443,806
1920	489,152,637	39·5	464,028,183	37·4	286,311,278	1,239,492,098
1921	312,844,871	26·3	542,322,967	45·6	333,995,863	1,189,163,701
1922	299,361,675	40·4	292,588,643	39·5	148,290,362	740,240,680
1923[2]	379,067,445	40·7	369,080,218	39·6	183,303,780	931,451,443

[1] Nine months. [2] Figures for 1923 are subject to revision.

6.—Imports from the United Kingdom, from the United States and from other Countries of Merchandise entered for Home Consumption, 1868-1923.

Fiscal Year.	Imports from United Kingdom.	Per cent Imports from U.K. to Total Imports. (mdse.)	Imports from United States.	Per cent Imports from U.S. to Total Imports. (mdse.)	Imports from Other Countries.	Total Imports for Home consumption.
	$	p.c.	$	p.c.	$	$
1868	37,617,325	56·1	22,660,132	33·8	6,812,702	67,090,159
1869	35,496,764	56·2	21,497,380	34·0	6,160,797	63,154,941
1870	37,537,095	56·1	21,697,237	32·4	7,667,742	66,902,074
1871	48,498,202	57·6	27,185,586	32·3	8,530,600	84,214,388
1872	62,209,254	59·7	33,741,995	32·1	9,004,118	104,955,367
1873	67,996,945	54·6	45,189,110	36·3	11,323,074	124,509,129
1874	61,424,407	49·9	51,706,906	42·0	10,049,574	123,180,887
1875	60,009,084	51·1	48,930,358	41·7	8,469,126	117,408,568
1876	40,479,253	43·8	44,099,880	47·7	7,933,974	92,513,107
1877	39,331,621	41·8	49,376,008	52·5	5,418,765	94,126,394
1878	37,252,769	41·2	48,002,875	53·1	5,140,207	90,395,851
1879	30,967,778	39·3	42,170,306	53·6	5,564,435	78,702,519
1880	33,764,439	48·3	28,193,783	40·3	7,942,320	69,900,542
1881	42,885,142	47·4	36,338,701	40·6	11,264,486	90,488,329
1882	50,356,268	45·3	47,052,935	42·3	13,735,981	111,145,184
1883	51,679,762	42·4	55,147,243	45·3	15,034,491	121,861,496
1884	41,925,121	39·6	49,785,888	47·0	14,261,969	105,972,978
1885	40,031,448	40·1	45,576,510	45·7	14,147,817	99,755,775
1886	39,033,006	40·7	42,818,651	44·6	14,140,480	95,992,137
1887	44,741,350	42·6	44,795,908	42·6	15,569,952	105,107,210
1888	39,167,644	38·9	46,440,296	46·1	15,063,688	100,671,628
1889	42,251,189	38·7	50,029,419	45·9	16,817,588	109,098,196
1890	43,277,009	38·8	51,365,661	46·0	17,039,903	111,682,573
1891	42,018,943	37·7	52,033,477	46·7	17,481,534	111,533,954
1892	41,063,711	35·7	51,742,132	44·9	22,354,570	115,160,413
1893	42,529,340	36·9	52,339,796	45·4	20,301,694	115,170,830
1894	37,035,963	34·0	50,746,091	46·5	21,288,857	109,070,911
1895	31,059,332	30·9	50,179,004	49·8	19,437,555	100,675,891
1896	32,824,505	31·2	53,529,390	50·8	19,007,266	105,361,161
1897	29,401,188	27·6	57,023,342	53·5	20,193,297	106,617,827
1898	32,043,461	25·4	74,824,923	59·2	19,438,778	126,307,162
1899	36,966,552	24·7	88,506,881	59·2	23,948,983	149,422,416
1900	44,280,041	25·7	102,224,917	59·2	26,146,718	172,651,676
1901	42,820,334	24·1	107,377,906	60·3	27,732,679	177,930,919
1902	49,022,726	25·0	115,001,533	58·4	32,713,545	196,737,804
1903	58,793,038	26·2	129,071,197	57·3	37,230,574	225,094,809
1904	61,724,893	25·3	143,329,697	58·7	38,854,825	243,909,415
1905	60,342,704	24·0	152,778,576	60·6	38,842,934	251,964,214
1906	69,183,915	24·4	169,256,452	59·6	45,299,913	283,740,280
1907[1]	64,415,756	25·8	149,085,577	59·5	36,724,502	250,225,835
1908	94,417,320	26·8	205,309,803	58·2	52,813,756	352,540,879
1909	70,682,600	24·5	170,432,360	59·0	47,479,236	288,594,196
1910	95,337,058	25·8	218,004,556	58·9	56,976,585	370,318,199
1911	109,934,753	24·3	275,824,265	60·8	66,965,585	452,724,603
1912	116,906,360	22·4	331,384,657	63·4	74,113,658	522,404,675
1913	138,742,464	20·7	436,887,315	65·0	95,577,275	671,207,234
1914	132,070,406	21·4	396,302,138	64·0	90,821,454	619,193,998
1915	90,157,204	19·8	297,142,059	65·2	68,656,645	455,955,908
1916	77,404,361	15·2	370,880,549	73·0	59,916,224	508,201,134
1917	107,096,735	12·7	665,312,759	78·6	74,041,384	846,450,878
1918	81,324,283	8·4	792,894,957	82·3	89,313,338	963,532,578
1919	73,035,118	8·0	750,203,024	81·6	96,473,563	919,711,705
1920	126,362,631	11·9	801,097,318	75·3	137,068,174	1,064,528,123
1921	213,973,562	17·3	856,176,820	69·0	170,008,500	1,240,158,882
1922	117,135,343	15·7	515,958,196	69·0	114,710,793	747,804,332
1923[2]	141,287,671	17·6	540,917,432	67·4	120,259,940	802,465,043

[1]Nine months. [2]Figures for 1923 are subject to revision.

7.—Percentage Proportions of Imports from United Kingdom and United States, respectively, to totals of dutiable and free in the 23 fiscal years 1901-1923.

Fiscal Year.	United Kingdom.			United States.		
	Dutiable to total dutiable.	Free to total free.	Dutiable and free to all imports.	Dutiable to total dutiable.	Free to total free.	Dutiable and free to all imports.
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
1901	29·92	15·50	24·10	50·58	74·66	60·30
1902	29·54	17·94	24·95	50·72	70·11	58·40
1903	30·85	18·84	26·15	50·10	68·46	57·29
1904	30·18	17·73	25·34	52·07	69·14	58·71
1905	29·88	15·14	23·98	52·21	73·13	60·58
1906	30·40	15·03	24·42	51·74	71·90	59·59
1907 (9 months)	32·05	16·04	25·79	51·93	71·28	59·50
1908	32·64	17·35	26·83	50·59	70·51	58·16
1909	29·84	16·31	24·52	51·76	70·20	59·00
1910	31·60	16·49	25·78	52·29	69·22	58·81
1911	29·82	15·05	24·34	54·14	72·05	60·84
1912	26·69	14·72	22·42	58·72	71·74	63·37
1913	24·47	13·43	20·71	62·57	69·78	65·03
1914	24·95	14·26	21·35	60·81	70·16	63·96
1915	24·31	12·61	19·79	60·27	72·85	65·13
1916	17·97	11·63	15·24	68·93	78·29	72·95
1917	16·35	8·24	12·67	71·91	86·59	78·57
1918	10·70	5·54	8·45	79·16	86·29	82·27
1919	9·50	5·90	7·97	79·10	84·74	81·50
1920	13·44	8·93	11·87	72·04	81·26	75·25
1921	20·07	11·17	17·25	64·19	79·51	69·04
1922	19·20	8·72	15·66	62·97	80·88	69·02
1923	21·61	9·49	17·61	61·85	78·66	67·41

NOTE.—For the years 1868 to 1900, see Canada Year Book, 1916-17, pages 403-4.

8.—Average ad valorem Rates of Duty collected on Imports from United Kingdom, United States, and all Countries in the 56 fiscal years 1868-1923.

Year.	United Kingdom.		United States.		All Countries.		Year.	United Kingdom.		United States.		All Countries.	
	Average ad valorem rate of duty on							Average ad valorem rate of duty on					
	Dutiable Imports.	Total Imports.	Dutiable Imports.	Total Imports.	Dutiable Imports.	Total Imports.		Dutiable Imports.	Total Imports.	Dutiable Imports.	Total Imports.	Dutiable Imports.	Total Imports.
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.		p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
1868	–	–	–	–	20·2	13·1	1896	30·2	22·4	26·7	14·5	30·0	19·2
1869	16·9	13·5	20·1	7·3	20·2	13·1	1897	30·7	21·1	26·7	14·3	30·0	18·7
1870	16·8	13·4	19·5	7·8	20·9	14·1	1898	29·5	20·8	26·1	13·3	29·7	17·5
1871	16·4	13·5	16·3	8·4	19·6	14·0	1899	26·6	19·8	26·3	13·2	28·8	17·2
1872	16·4	12·7	18·0	7·1	19·1	12·4	1900	25·6	18·2	25·0	13·2	27·7	16·7
1873	15·6	10·9	17·7	6·5	18·3	10·4	1901	24·7	18·3	24·8	12·4	27·5	16·4
1874	16·5	12·8	17·4	7·1	18·9	11·7	1902	24·0	17·2	25·2	13·2	27·3	16·5
1875	18·1	14·8	17·3	7·9	19·6	13·1	1903	23·3	16·7	24·9	13·3	27·1	16·5
1876	18·8	15·0	19·2	9·3	21·3	13·9	1904	24·1	17·6	25·2	13·6	27·5	16·8
1877	19·4	16·2	18·7	7·9	20·6	13·3	1905	24·8	18·5	26·1	13·5	27·8	16·7
1878	20·1	17·3	20·4	9·4	21·4	14·2	1906	24·6	18·7	24·8	13·1	27·0	16·4
1879	20·5	18·0	23·2	13·1	23·3	16·4	1907 (9 m.)	24·3	18·4	24·2	12·8	26·5	16·1
1880	24·0	20·0	23·1	16·0	26·1	20·2	1908	24·2	18·3	24·6	13·2	26·7	16·5
1881	24·5	20·5	22·0	15·5	25·8	20·4	1909	25·8	19·0	24·9	13·2	27·5	16·7
1882	24·1	19·9	21·5	15·0	25·3	19·5	1910	25·1	18·9	24·8	13·5	26·8	16·5
1883	24·3	19·2	21·1	14·8	25·3	19·0	1911	24·6	18·9	24·7	13·7	25·9	16·2
1884	24·4	19·1	20·7	14·9	25·2	19·0	1912	25·0	19·1	25·0	14·8	26·1	16·8
1885	24·8	19·0	21·2	14·5	26·1	19·2	1913	25·1	19·6	24·9	15·8	26·1	17·1
1886	25·7	20·0	22·8	15·8	27·5	20·2	1914	25·2	19·5	24·8	15·6	26·1	17·3
1887	26·1	20·8	23·8	16·2	28·7	21·3	1915	27·1	20·5	25·1	14·2	27·4	16·8
1888	29·1	22·9	26·2	15·3	31·8	22·0	1916	28·4	19·1	25·0	13·5	27·2	15·5
1889	29·3	22·4	25·4	14·7	31·9	21·8	1917	24·9	17·6	22·7	11·4	23·8	13·0
1890	28·8	22·1	26·6	15·8	31·0	21·4	1918	24·3	17·3	20·5	11·1	21·5	12·1
1891	29·0	21·7	26·0	14·9	31·4	21·0	1919	22·3	15·3	20·9	11·6	21·5	12·3
1892	29·4	22·1	26·5	15·1	29·7	17·8	1920	22·1	16·2	22·5	14·0	22·5	14·7
1893	29·8	22·3	26·7	14·6	30·3	18·4	1921	20·9	16·6	20·3	12·9	20·6	14·1
1894	30·0	22·3	27·0	13·7	30·9	17·8	1922	24·8	20·1	23·0	13·9	24·5	16·2
1895	30·1	22·6	26·7	13·7	30·5	17·8	1923	24·5	20·1	22·5	13·8	24·9	16·7

9.—Imports for Home Consumption of certain Raw Materials used in Canadian Manufactures, 1902-1923.

Fiscal Year.	Rags, all kinds.	Broom corn.[1]	Hides, horns, pelts, etc.[1]	Sugar, raw.	Tobacco, raw.
	Cwt.	$	$	Ton.	Lb.
1902	367,373	202,487	5,086,052	159,348	11,329,674
1903	241,286	165,231	5,662,744	180,849	13,380,504
1904	254,484	197,982	4,916,222	183,405	14,248,303
1905	1,116,215	175,412	5,240,717	163,717	13,859,152
1906	1,697,801	196,804	6,811,267	210,215	14,519,658
1907 (9 months)	156,102	167,654	5,843,511	142,334	14,347,476
1908	323,453	238,512	4,908,871	217,281	15,690,076
1909	256,617	246,701	5,218,108	226,712	15,994,878
1910	496,057	432,146	8,237,014	231,152	13,753,141
1911	536,604	389,173	8,105,330	271,532	17,204,271
1912	564,296	437,001	8,903,727	281,402	17,203,513
1913	750,003	377,462	13,486,459	310,101	22,153,588
1914	716,882	324,590	8,831,010	347,168	17,598,449
1915	540,922	285,574	12,842,558	335,820	18,595,957
1916	510,472	337,688	12,441,731	298,433	20,834,672
1917	780,062	449,137	12,863,893	365,772	17,702,637
1918	505,643	851,933	8,794,289	382,807	17,824,947
1919	570,211	1,119,700	5,426,008	359,470	25,103,080
1920	352,413	840,180	22,654,661	540,787	24,345,295
1921	316,315	511,222	10,652,787	347,594	20,007,411
1922	216,915	327,114	5,898,087	432,212	20,870,509
1923[3]	329,894	685,819	7,947,410	571,728	14,548,694

[1]Value only; the Trade and Navigation Returns do not give quantities.

Fiscal Year.	Cotton wool or raw cotton and waste.	Hemp, undressed.	Wool, raw.	Gutta percha, India-rubber, etc., crude.
	Cwt.	Cwt.	Cwt.	Cwt.
1902	693,578	160,794	103,607	29,104
1903	735,760	129,856	79,947	28,615
1904	557,765	123,885	73,394	32,134
1905	636,594	102,529	76,172	28,103
1906	675,495	123,857	63,118	24,916
1907 (9 months)	662,548	75,037	39,228	20,021
1908	522,552	145,969	61,292	25,562
1909	653,160[1]	69,553[2]	56,839	20,391
1910	680,835[1]	58,911[2]	74,271	35,555
1911	812,622[1]	81,017[2]	64,224	28,035
1912	727,939[1]	82,661[2]	71,954	44,313
1913	774,578[1]	64,990[2]	92,092	56,655
1914	769,930[1]	55,572[2]	72,521	44,504
1915	730,325[1]	53,370[2]	131,940	65,045
1916	969,679[1]	50,914[2]	211,407	99,132
1917	877,634[1]	15,846[2]	145,812	107,580
1918	880,374[1]	45,177[2]	115,380	130,956
1919	1,117,235[1]	72,887[2]	158,767	192,272
1920	964,715[1]	46,553[2]	117,717	244,335
1921	986,315[1]	47,090[2]	92,772	228,062
1922	953,860[1]	77,833[2]	125,867	189,525
1923[3]	1,252,615[1]	203,844[2]	182,556	253,913

[1]Cotton waste included with rags, all kinds. [2]Includes dressed hemp. [3]Figures for 1923 are subject to revision.

10.—Exports to the United Kingdom, to the United States and to all countries, by classes of Merchandise the Produce of Canada, by values and percentages, 1920-1923.

(According to new Classification.)

VALUES.

Classes.	1920.			1921.			1922.			1923.[1]		
	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.
	$	$	$	$	$	$	$	$	$	$	$	$
Vegetable products (except chemicals, fibres and wood)	249,409,394	55,735,692	415,820,135	141,169,556	146,539,883	482,140,444	196,199,365	47,587,209	317,578,963	268,828,862	41,891,873	407,760,092
Animals and their products (except chemicals and fibres)	138,885,994	130,997,017	314,017,944	91,291,301	75,751,046	188,359,937	70,368,963	48,391,355	135,798,720	64,628,261	55,225,166	135,841,642
Fibres, textiles and textile products	3,851,357	12,472,456	34,028,314	2,643,202	7,122,882	18,783,884	1,020,612	1,996,634	4,585,987	1,077,976	4,432,767	7,850,843
Wood, wood products, and paper	42,026,282	153,686,140	213,913,944	36,761,384	216,011,556	284,561,478	15,664,295	148,065,672	179,925,887	19,834,368	191,363,061	228,756,205
Iron and its products	15,874,157	25,717,121	81,785,829	17,653,826	19,630,413	76,500,741	4,758,888	4,693,020	28,312,272	11,556,627	9,409,265	51,137,912
Non-ferrous metals and their products	9,260,569	37,545,943	54,976,413	9,873,516	30,029,799	45,939,377	5,997,576	14,687,260	27,885,996	8,107,032	27,889,699	44,358,037
Non-metallic minerals and their products (except chemicals)	3,121,157	17,488,266	30,342,926	3,127,338	22,270,447	40,121,892	3,253,427	12,605,032	22,616,684	728,674	20,817,688	27,646,704
Chemicals and allied products	3,894,732	13,803,067	22,883,685	3,399,815	12,236,087	20,366,279	1,062,757	5,937,136	9,506,170	1,984,441	7,951,543	14,046,940
Miscellaneous commodities	22,828,995	16,582,481	71,722,908	6,924,933	12,730,854	32,389,669	1,035,792	8,625,325	14,030,001	2,321,204	10,099,156	14,053,068
Total	**489,152,637**	**464,028,183**	**1,239,492,098**	**312,844,871**	**542,322,967**	**1,189,163,701**	**299,361,675**	**292,588,643**	**749,249,680**	**379,067,445**	**369,080,218**	**931,451,443**

PERCENTAGE OF EACH CLASS.

	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Vegetable products (except chemicals, fibres and wood)	50·99	12·01	33·55	45·12	27·02	40·54	65·54	16·26	42·90	70·92	11·35	43·78
Animals and their products (except chemicals and fibres)	28·39	28·23	25·33	29·18	13·97	15·84	23·51	16·54	18·35	17·05	14·96	14·58
Fibres, textiles and textile products	0·79	2·69	2·75	0·85	1·31	1·58	0·34	0·68	0·62	0·29	1·20	0·84
Wood, wood products, and paper	8·59	33·12	17·26	11·75	39·83	23·93	5·23	50·61	24·31	5·23	51·85	24·56
Iron and its products	3·25	5·54	6·60	5·64	3·62	6·43	1·59	1·60	3·82	3·05	2·55	5·49
Non-ferrous metals and their products	1·89	8·09	4·43	3·16	5·54	3·86	2·00	5·02	3·77	2·14	7·56	4·76
Non-metallic minerals and their products (except chemicals)	0·64	3·77	2·45	1·00	4·11	3·37	1·09	4·31	3·06	0·19	5·64	2·97
Chemicals and allied products	0·79	2·98	1·84	1·09	2·25	1·72	0·35	2·03	1·28	0·52	2·15	1·51
Miscellaneous commodities	4·67	3·57	5·79	2·21	2·35	2·73	0·35	2·95	1·89	0·61	2·74	1·51
Total	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**

[1] Unrevised figures.

II. Imports from the United Kingdom, from the United States, and from all countries, by classes of Merchandise entered for Home Consumption, by values and percentages, 1920-1923.

(According to new Classification.)

VALUES.

Classes.	1920.			1921.			1922.			1923.[1]		
	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.
	$	$	$	$	$	$	$	$	$	$	$	$
Agricultural and vegetable products (except chemicals, fibres and wood)	17,004,533	142,294,388	241,846,147	38,724,082	119,614,933	259,431,110	27,950,425	84,803,204	172,665,523	26,666,163	73,049,546	161,669,784
Animal products (except chemicals and fibres)	3,789,311	77,010,313	95,098,743	5,148,783	42,911,179	61,722,390	3,092,895	36,110,305	46,645,789	3,143,223	34,812,367	46,736,774
Fibres, textiles and textile products	74,653,042	132,292,083	231,559,877	111,348,051	101,738,045	243,608,342	50,892,567	67,619,469	139,997,137	69,339,824	77,285,998	170,146,958
Wood, wood products, and paper	1,515,780	40,719,024	43,183,267	3,144,574	52,359,847	57,449,384	2,657,542	31,423,889	35,791,487	2,708,338	31,841,957	35,845,544
Iron and its products	6,637,067	178,661,606	186,319,876	16,698,085	226,855,725	245,625,703	8,985,903	99,938,235	110,210,539	12,671,433	124,371,885	138,724,455
Non-ferrous metals and their products	3,339,207	46,940,714	52,176,434	6,682,748	45,959,914	55,651,319	2,523,868	25,343,095	29,773,413	3,595,638	31,791,237	37,492,604
Non-metallic minerals and their products (except chemicals)	6,945,566	108,525,324	121,956,176	9,118,403	188,459,045	206,095,113	6,324,790	118,216,653	137,604,140	12,508,655	114,641,860	139,919,012
Chemicals and allied products	4,154,345	23,997,657	30,042,823	6,046,972	28,128,104	37,887,449	3,237,117	18,143,315	24,630,333	3,636,013	18,347,545	25,793,101
Miscellaneous commodities	8,323,780	50,656,209	62,344,780	17,061,864	50,150,028	72,688,072	11,470,236	34,369,031	50,485,971	7,018,384	34,775,037	46,136,811
Total	**123,362,631**	**801,097,318**	**1,064,528,123**	**213,973,562**	**856,176,820**	**1,249,158,882**	**117,135,343**	**515,958,196**	**747,804,332**	**141,287,671**	**540,917,432**	**802,465,043**

PERCENTAGE OF EACH CLASS.

	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Agricultural and vegetable products (except chemicals, fibres and wood)	13·46	17·76	22·72	18·10	13·97	20·92	23·86	16·44	23·09	18·87	13·51	20·15
Animal products (except chemicals and fibres)	3·00	9·61	8·93	2·41	5·01	4·98	2·64	7·00	6·24	2·22	6·44	5·82
Fibres, textiles and textile products	59·08	16·52	21·75	52·04	11·88	19·64	43·45	13·11	18·72	49·08	14·28	21·20
Wood, wood products, and paper	1·20	5·08	4·06	1·47	6·11	4·63	2·27	6·09	4·79	1·92	5·89	4·49
Iron and its products	5·25	22·30	17·50	7·80	26·50	19·81	7·67	19·37	14·74	8·97	22·99	17·72
Non-ferrous metals and their products	2·64	5·86	4·90	3·12	5·37	4·49	2·15	4·91	3·98	2·54	5·88	4·67
Non-metallic minerals and their products (except chemicals)	5·49	13·55	11·46	4·26	22·01	16·62	5·40	22·91	18·40	8·85	21·19	17·44
Chemicals and allied products	3·29	3·00	2·82	2·82	3·29	3·05	2·77	3·51	3·29	2·57	3·39	3·21
Miscellaneous commodities	6·59	6·32	5·86	7·98	5·86	5·86	9·79	6·66	6·75	4·97	6·43	5·75
Total	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**

[1] Unrevised figures.

12.—Exports of Canada to United Kingdom, United States and All Countries in

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	United Kingdom.
	I. Agricultural and Vegetable Products. (Except chemicals, fibres and wood.)					
	Beverages, Alcoholic—					
	Brewed—					
1	Ale, beer and porter	gal.	146	2,475	209,113	102
		$	199	798	145,077	86
	Distilled—					
2	Gin	gal.	–	–	2,422	–
		$	–	–	7,682	–
3	Whiskey	gal.	272,439	1,286	463,949	134,711
		$	750,078	5,374	1,504,132	374,662
4	All other spirits, n.o.p.	gal.	787,983	334,832	1,374,282	14,843
		$	2,103,945	664,021	2,964,959	19,267
	Fermented—					
5	Cider	gal.	10,482	24,672	40,256	–
		$	3,720	36,906	43,334	–
6	Wines	gal.	420	–	6,914	386
		$	738	–	18,087	812
	Total beverages, alcoholic	gal.	**1,071,470**	**363,265**	**2,096,936**	**150,042**
		$	**2,858,680**	**707,099**	**4,683,271**	**394,827**
	Fruits, fresh—					
7	Apples, green or ripe	brl.	590,400	236,000	873,882	1,272,533
		$	3,140,269	856,760	4,242,219	7,902,013
8	Berries, all kinds	$	–	228,342	229,656	–
9	All other fresh fruits, n.o.p.	$	4,405	134,186	142,719	7,464
	Dried and preserved—					
10	Apples dried	lb.	1,100,500	1,273,939	3,977,306	1,112,885
		$	76,167	167,445	514,727	188,774
11	Canned or preserved fruits	$	1,870,981	168,105	3,174,239	514,23
12	Fruits, dried, n.o.p.	lb.	60	–	2,760	–
		$	21	–	655	–
	Total fruits	$	**5,091,843**	**1,554,838**	**8,304,215**	**8,610,167**
	Grains, flours and kindred products—					
	Grains—					
13	Barley	bush.	12,686,866	1,050,031	14,395,031	7,940,979
		$	18,138,354	1,153,933	20,206,972	10,561,195
14	Beans	bush.	1,074	101,485	105,959	20
		$	4,680	347,069	367,955	120
15	Buckwheat	bush.	–	188,794	188,794	19,976
		$	–	249,337	249,337	22,024
16	Corn, Indian	bush.	131	34,170	37,101	2
		$	259	62,049	68,176	10
17	Oats	bush.	3,610,792	3,751,111	10,768,872	7,096,419
		$	3,300,477	3,059,427	9,349,455	6,623,635
18	Peas, split	bush.	2,193	22,377	59,389	613
		$	8,160	76,494	222,707	2,415
19	Peas, whole	bush.	60,730	135,051	228,546	31,775
		$	210,678	540,481	920,440	181,786
20	Rice	lb.	–	4,237,542	5,954,284	166,600
		$	–	496,416	668,077	11,895
21	Rye	bush.	947,480	1,018,327	2,113,302	1,108,789
		$	1,644,138	1,560,499	3,475,834	2,331,294
22	Wheat	bush.	51,426,131	6,661,588	77,978,037	29,294,612
		$	122,108,193	14,000,932	185,044,806	73,489,796
	Total grains	$	**145,414,939**	**21,546,637**	**220,573,759**	**93,224,170**
	Flour and milled products—					
23	Bran, shorts and middlings	cwt.	540	1,229,398	1,314,911	4,670
		$	1,170	2,779,255	2,983,843	6,170
24	Cornmeal	brl.	42,773	249	54,941	242
		$	372,364	1,617	454,528	2,000
25	Malt	bush.	–	–	613,540	39,747
		$	–	–	1,320,773	39,747
26	Oatmeal and rolled oats	cwt.	694,112	5,517	805,203	357,241
		$	3,717,224	22,495	4,283,772	2,096,098
27	Rice meal and rice flour	lb.	695,200	51,660	746,860	1,083,730
		$	42,134	2,415	44,549	68,328

quantities and values by classes of home produce in the four fiscal years 1920-1923.

1921.		1922.			1923.[1]			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
51	793,172	3,000	312,550	472,735	44	1,349,202	1,500,763	1
125	912,964	4,080	687,467	849,285	54	2,696,400	2,866,351	
265	972	–	–	4	1	277	3,211	2
1,392	3,459	–	–	15	15	3,910	48,160	
1,616	370,918	84,155	20,228	193,773	44,598	28,568	407,718	3
17,025	1,697,158	193,270	235,183	925,895	68,800	476,963	2,983,524	
220,464	529,124	–	157	4,616	–	59	2,596	4
374,565	587,277	–	3,160	11,396	–	1,543	6,264	
61,787	72,544	11,737	118,404	131,431	8,000	85,615	93,910	5
46,175	52,565	3,871	66,489	71,194	1,300	30,248	31,779	
4	2,441	–	87	2,100	212	31	870	6
51	6,774	–	177	3,658	443	92	2,027	
284,187	**1,769,171**	**98,892**	**451,426**	**804,659**	**52,855**	**1,463,752**	**2,009,068**	
439,333	**3,260,197**	**201,221**	**992,476**	**1,861,443**	**70,612**	**3,209,156**	**5,938,105**	
48,107	1,358,499	1,315,938	486,445	1,845,955	1,325,658	71,744	1,460,656	7
171,226	8,299,099	6,244,209	2,381,419	8,854,379	5,842,200	325,385	6,452,044	
376,661	377,230	–	309,145	309,318	–	379,307	379,468	8
554,611	570,252	73,748	505,529	584,825	85,836	503,684	595,720	9
125,756	2,066,999	1,109,360	840,874	4,357,932	259,370	29,200	532,470	10
15,245	315,372	116,907	91,772	535,995	31,015	2,920	60,514	
74,565	751,520	946,276	322,708	1,295,725	648,526	159,267	850,385	11
24,178	31,629	–	14,880	20,435	–	5,975	30,032	12
5,810	7,405	–	797	1,587	–	1,737	5,835	
1,200,441	**10,320,878**	**7,381,140**	**3,611,370**	**11,581,829**	**6,607,577**	**1,372,300**	**8,343,966**	
304,878	8,563,553	9,481,888	5,167	12,580,979	11,854,372	949,408	14,584,005	13
472,033	11,469,050	7,582,764	3,018	9,821,087	7,441,853	507,656	9,164,756	
12,282	14,376	200	4,399	11,634	5,437	74,877	80,813	14
53,794	64,800	1,218	14,257	32,302	15,535	233,408	240,428	
247,884	271,838	83,822	138,922	403,300	129,117	214,801	525,424	15
315,815	342,549	69,758	137,360	362,033	104,587	178,823	433,466	
8,616	17,560	2,280	17,247	25,278	6,138	4,933	26,777	16
16,692	34,615	2,105	20,240	30,074	4,933	7,318	27,757	
4,765,202	14,321,048	20,735,804	3,217,419	36,195,127	20,965,361	842,931	29,022,347	17
4,694,519	14,152,033	10,738,497	1,446,014	18,717,105	10,113,856	412,742	14,533,015	
2,402	56,263	–	20,885	84,258	–	3,163	55,484	18
9,395	241,092	–	69,941	265,281	–	9,958	174,402	
47,696	113,262	15,976	154,290	177,715	36,147	159,772	210,869	19
263,812	606,342	68,448	473,921	569,653	117,100	419,717	582,444	
278,200	2,357,384	–	885	172,825	–	–	5,751	20
22,523	223,732	–	66	6,761	–	–	258	
717,086	3,201,430	1,110,899	105,631	3,180,502	7,200,399	441,229	10,129,350	21
1,344,976	6,231,170	1,096,888	97,597	3,526,639	5,664,209	338,183	8,152,876	
42,324,894	129,215,157	92,498,351	16,592,797	136,489,238	166,846,960	16,213,629	215,074,566	22
91,442,298	310,952,138	119,976,127	23,335,277	179,990,730	192,002,549	18,828,694	252,145,805	
98,635,857	**344,317,521**	**139,535,805**	**25,597,691**	**213,321,665**	**215,464,622**	**20,936,454**	**285,465,297**	
719,948	819,781	4,791	854,829	954,616	7,394	1,725,023	1,924,522	23
1,236,851	1,481,097	3,957	939,910	1,103,899	7,160	1,917,732	2,194,326	
840	24,588	395	–	19,348	–	32	29,249	24
7,722	187,003	2,244	–	94,178	–	132	127,838	
–	629,620	–	30,549	124,583	–	–	128,106	25
–	1,350,201	–	63,625	237,510	–	–	176,564	
3,544	397,266	571,347	12,710	651,135	328,333	15,510	379,237	26
19,709	2,343,965	2,214,820	43,994	2,525,407	1,375,518	71,990	1,596,527	
60,250	1,360,068	1,064,640	240	1,064,880	323,000	–	323,000	27
1,219	84,298	22,572	34	22,606	7,690	–	7,690	

[1]Unrevised figure

12.—Exports of Canada to United Kingdom, United States and All Countries in quan-

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	1919. United Kingdom.
	I. Agricultural and Vegetable Products—con. (Except chemicals, fibres and wood.)					
	Flour and milled products—concluded.					
1	Rye flour	brl.	11,064	9,590	35,786	–
		$	107,565	74,099	297,768	–
2	Screenings	cwt.	–	1,271,695	1,271,695	7,763
		$	–	1,126,799	1,126,799	10,847
3	Wheat flour	brl.	5,824,811	29,762	8,863,068	2,746,780
		$	61,494,045	337,514	94,262,928	28,896,091
4	All other meal	brl.	1,835	257	2,156	–
		$	15,479	2,520	18,387	–
	Total flour and milled products	$	**65,719,981**	**4,396,714**	**104,793,347**	**31,119,281**
	Bakery products and prepared food—					
5	Biscuits and bread	cwt.	743	1,510	14,647	–
		$	13,545	14,787	203,721	–
6	Cereal foods, prepared, all kinds	$	1,048,826	5,399	1,087,901	803,248
7	Macaroni, spaghetti and vermicelli	lb.	3,587,770	80,964	4,442,176	2,292,980
		$	363,284	6,763	448,981	269,598
8	Cornstarch	lb.	91,690	11,500	129,792	1,720
		$	6,724	878	10,056	220
9	Potato starch	lb.	88,000	169,025	460,025	–
		$	6,945	8,433	28,257	–
	Total grains, flours and kindred products	$	**212,603,985**	**25,929,810**	**327,146,022**	**125,416,517**
	Oils, vegetable, and by-products—					
10	Oilcake	cwt.	291,219	20,725	437,925	89,799
		$	946,083	61,149	1,465,366	296,044
11	Oils, vegetable, n.o.p.	gal.	11,981	918,673	975,766	32
		$	32,587	757,999	878,346	125
	Total oils, vegetable, and by-products	$	**978,670**	**819,148**	**2,343,712**	**296,169**
	Rubber and its products—					
	Raw and partly manufactured—					
12	Waste	cwt.	1,278	64,423	65,701	–
		$	8,662	433,477	442,139	–
13	Belting	lb.	2,235	285	29,902	–
		$	1,295	269	24,455	–
14	Boots and shoes	$	829,154	3,203	1,750,967	457,561
15	Clothing, including waterproofed	$	782	6,055	56,640	411
16	Hose	$	25,137	102,230	169,822	8,192
17	Tires for vehicles, pneumatic tire casings	$	–	–	–	–
18	" " inner tubes	$	–	–	–	–
19	" " solid rubber	$	548	1,695	103,395	252
20	Tires, pneumatic	$	3,547,601	251,554	7,291,777	3,641,468
21	All other mfs. of India rubber, n.o.p.	$	69,665	62,638	230,768	100,399
	Total rubber and its products	$	**4,482,844**	**861,121**	**10,069,963**	**4,208,283**
	Seeds for sowing—					
22	Clover	bush.	27,154	157,868	186,328	43,420
		$	694,760	3,583,510	4,314,341	723,093
23	Flax	bush.	34,052	79	35,009	51,304
		$	316,134	926	327,139	357,974
24	Grass	bush.	422	57,196	58,535	1,388
		$	2,513	146,424	152,408	6,848
25	All other seeds, n.o.p.	$	2,891	46,827	52,967	432
	Total seeds for sowing	$	**1,016,298**	**3,777,687**	**4,846,855**	**1,088,347**
	Sugar, molasses syrups, and confectionery—					
26	Confectionery	$	5,002,031	132,728	5,988,324	419,623
27	Maple sugar	lb.	33,379	3,971,435	4,005,124	18,924
		$	7,515	1,114,304	1,121,959	5,499
28	Maple syrup	gal.	1,664	6,790	9,270	1,785
		$	2,941	15,702	20,669	5,295
29	Molasses	gal.	34,532	1,753,225	1,787,757	205
		$	16,540	163,004	179,544	955
	Sugar house syrup	gal.	399,644	50,044	449,734	–
		$	172,097	22,770	194,891	–

tities and values by classes of home produce in the four fiscal years 1920-1923—con.

1921.		1922.			1923.[1]			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
450	10,833	357	–	1,502	285	1	286	1
5,179	104,613	2,091	–	9,955	1,628	6	1,634	
1,122,483	1,152,385	–	385,714	385,714	3,550	1,696,026	1,700,716	2
651,370	702,144	–	53,661	53,661	2,773	337,474	340,894	
1,187,750	6,017,032	4,737,020	570,567	7,414,282	4,723,527	612,564	10,227,060	3
12,023,090	66,520,490	33,943,408	3,824,832	53,478,150	27,174,526	3,883,424	60,075,426	
345	855	4,889	244	6,305	9,553	198	9,834	4
3,439	6,805	22,320	2,092	31,740	38,527	1,860	41,671	
13,948,579	**72,789,616**	**36,211,412**	**4,928,148**	**57,557,097**	**28,607,822**	**6,212,618**	**64,562,570**	
3,571	9,038	7	1,582	5,291	–	1,078	4,811	5
29,944	139,532	158	16,596	84,346	–	11,001	69,196	
20,248	854,254	773,292	15,997	816,575	466,842	14,641	510,593	6
268	2,545,359	2,476,796	463	2,695,016	276,306	26,450	395,784	7
48	299,560	218,556	63	240,642	20,985	2,763	32,343	
6,410	34,009	–	–	13,205	–	–	9,890	8
434	3,137	–	–	1,148	–	–	904	
–	570	–	–	30	–	–	–	9
–	63	–	–	6	–	–	–	
112,635,119	**418,394,683**	**176,739,223**	**30,558,495**	**272,021,479**	**244,560,271**	**27,177,477**	**350,640,813**	
13,850	195,247	59,180	15,640	413,916	84,181	16,115	447,202	10
38,453	663,834	143,517	32,189	1,010,152	200,500	40,058	1,084,954	
251,982	275,459	102	375,840	397,923	–	123,504	178,095	11
146,261	197,482	235	73,992	91,192	–	53,765	87,902	
184,714	**861,316**	**143,752**	**106,181**	**1,101,344**	**200,500**	**93,823**	**1,172,856**	
22,696	22,716	–	17,192	17,192	–	34,543	34,543	12
133,316	133,516	–	62,623	62,623	–	90,126	90,126	
10,303	99,359	–	615	106,746	3,900	5,530	363,657	13
7,755	83,869	–	455	56,197	1,372	1,583	177,304	
2,634	1,524,969	212,491	8,217	709,299	305,773	1,086	1,367,327	14
276	36,534	1,172	5,776	19,253	178	39	9,442	15
142,328	225,435	1,648	122,255	143,589	403	85,519	117,836	16
–	–	–	–	–	1,112,386	7,445	4,431,002	17
–	–	–	–	–	91,440	448	403,881	18
9,550	62,475	–	2,730	89,833	2,500	1,477	121,053	19
169,583	8,191,511	1,098,428	70,020	2,721,819	–	–	–	20
199,748	581,219	14,332	158,937	259,196	13,468	51,341	214,930	21
665,249	**19,839,528**	**1,328,171**	**431,013**	**4,061,809**	**1,527,520**	**239,064**	**6,932,901**	
123,524	179,255	20,365	229,110	258,401	73,058	197,648	304,928	22
1,098,783	2,005,460	184,229	1,546,933	1,809,281	547,807	1,230,107	2,017,239	
9,224	60,528	16,392	1,266	17,678	1,319	6	1,325	23
16,518	374,492	46,462	4,191	50,699	5,276	30	5,306	
81,130	93,690	1,200	83,479	86,339	577	56,736	62,247	24
167,445	202,554	5,796	316,420	326,369	3,142	115,792	127,092	
23,142	28,562	17,393	20,950	43,337	18,014	10,815	44,859	25
1,305,888	**2,611,068**	**253,885**	**1,888,494**	**2,229,686**	**574,239**	**1,356,744**	**2,194,496**	
57,524	1,190,718	45,736	29,124	440,174	40,774	3,679	433,492	26
7,979,970	7,999,233	28,511	2,052,774	2,092,715	40,745	2,695,561	2,738,227	27
1,956,637	1,962,258	4,409	158,799	164,389	8,049	336,106	374,457	
9,373	11,254	768	2,739	3,659	536	5,018	5,885	28
26,162	31,767	2,054	6,794	9,152	1,151	10,093	11,954	
883,685	887,667	3,381	1,277,646	1,290,425	–	801,166	801,968	29
95,879	102,398	470	60,104	66,007	–	21,292	21,889	
–	–	–	–	–	–	–	–	30
–	–	–	–	–	–	–	–	

[1] Unrevised figures.

12.—Exports of Canada to United Kingdom, United States and All Countries in quan-

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	United Kingdom.
	I. Agricultural and Vegetable Products— concluded. (Except chemicals, fibres and wood.)					
	Sugar, molasses, etc.—concluded.					
1	Sugar, all kinds, n.o.p.	lb.	129,704,089	4,772,912	245,321,907	1,124,142
		$	11,824,363	504,523	22,479,409	247,161
2	Syrups, n.o.p.	$	599,807	3,564	710,209	5,481
	Total sugar, molasses, syrup, and confectionery	$	**17,625,344**	**1,956,595**	**30,695,005**	**684,014**
	Tea and coffee—					
3	Coffee and imitations of	lb.	30	68,189	85,907	–
		$	15	11,273	17,535	–
	Tobacco—					
4	Tobacco, unmanufactured	lb.	181,176	23,695	223,595	160,112
		$	94,430	21,080	130,264	90,389
5	Cigars	lb.	2,209	15	7,394	995
		$	7,361	50	14,679	2,820
6	Cigarettes	lb.	2,310,005	735	3,076,949	29,536
		$	2,586,913	1,002	3,324,055	20,134
7	Stems and cuttings	cwt.	8,093	4,768	12,861	70
		$	2,947	4,406	7,353	2,638
8	All other tobacco	lb.	235,465	2,357	247,871	3,464
		$	198,596	3,970	211,830	3,173
	Total tobacco	$	**2,890,247**	**30,508**	**3,688,181**	**119,154**
	Vegetables, fresh—					
9	Beets, sugar	ton	–	7,723	7,723	–
		$	–	70,235	70,235	–
10	Potatoes	bush.	–	5,480,754	6,327,343	–
		$	–	6,819,405	8,039,107	–
11	Turnips	bush.	–	2,097,284	2,128,882	–
		$	–	939,630	957,042	–
12	All other vegetables, fresh	$	–	140,583	187,871	363
	Vegetables, prepared—					
13	Canned vegetables	lb.	16,902,987	595,795	19,107,690	2,928,361
		$	1,360,419	41,274	1,527,202	274,040
14	Dried vegetables	lb.	36	2,809,332	3,473,729	–
		$	8	679,872	875,026	–
	Total vegetables	$	**1,360,427**	**8,690,999**	**11,656,483**	**274,403**
	Other vegetable products—					
15	Flax, seed, n.o.p.	bush.	72,785	1,020,192	1,092,977	–
		$	354,543	4,713,993	5,068,536	–
16	Fodders, other, n.o.p.	$	–	1,111,926	1,144,414	1,158
17	Groceries, all kinds, n.o.p.	$	1,312	7,124	80,655	1,894
18	Gum, chicle	lb.	–	593,423	593,423	–
		$	–	734,414	734,414	–
19	Hay	ton	4,878	201,586	218,561	374
		$	95,786	3,675,105	4,087,670	9,629
20	Hops	lb.	–	–	6,698	19,265
		$	–	–	1,171	18,492
21	Nuts	lb.	–	122,012	123,993	17,880
		$	–	16,534	16,968	4,330
22	Plants, shrubs and trees	$	213	93,726	98,320	412
23	Roots, herbs, bark, flowers, etc., for medicinal use, n.o.p.	$	10,871	116,121	128,369	1,892
24	Sea grasses and plants	$	–	47,134	57,039	–
25	Senega root	lb.	17,789	388,616	415,223	26,687
		$	24,815	558,926	594,088	26,178
26	Straw	ton	6	5,350	5,539	–
		$	66	41,708	44,842	–
27	Vinegar	gal.	5,352	17,301	33,485	–
		$	5,901	9,869	20,376	–
28	Other agricultural products	$	7,534	270,034	292,028	11,367
	Total Agricultural and Vegetable Products (except chemicals, fibres and wood)	$	**249,409,394**	**55,735,692**	**415,820,135**	**141,169,556**

tities and values by classes of home produce in the four fiscal years 1920-1923—con.

1921.		1922.			1923.[1]			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
56,889,790	65,706,539	113,178,263	373,775	140,883,112	202,955,300	600,525	292,441,281	1
9,999,566	11,837,930	9,050,710	34,963	10,922,436	13,641,327	39,198	19,755,985	
–	11,454	19,257	–	19,299	11,516	–	11,539	2
12,135,768	**15,136,525**	**9,122,636**	**289,784**	**11,621,457**	**13,702,817**	**440,368**	**20,609,316**	
4,118	13,473	–	1,135	10,884	–	3,312	19,427	3
1,539	5,351	–	374	3,456	–	1,058	5,751	
26,831	200,153	340,487	12,847	471,991	892,482	10,421	1,100,007	4
34,097	130,457	135,784	5,216	175,826	248,374	6,133	297,923	
1	5,745	277	7	539	90	–	987	5
8	13,288	1,350	24	2,399	486	–	3,220	
176	69,861	–	69	24,205	30	50	44,703	6
382	41,983	–	262	24,743	80	124	25,798	
5,559	5,653	88	4,985	7,410	8	4,753	5,358	7
3,640	7,400	1,325	4,526	37,975	133	3,998	12,902	
5,597	13,514	147	6,733	13,158	–	12,760	18,297	8
9,485	17,716	176	11,279	18,686	–	20,222	27,271	
47,612	**219,844**	**138,635**	**21,307**	**259,629**	**249,073**	**30,477**	**367,114**	
11,502	11,502	–	10,481	10,481	–	11,430	11,430	9
103,175	103,175	–	63,151	63,151	–	56,730	56,730	
4,204,684	5,036,769	–	1,822,004	3,755,529	–	771,638	2,798,842	10
8,328,862	9,657,612	–	1,204,620	2,936,676	–	456,588	1,887,075	
1,756,538	1,786,755	–	1,648,803	1,664,223	–	2,010,918	2,023,648	11
444,830	460,506	–	456,044	461,633	–	309,906	313,167	
105,284	152,123	383	212,472	242,454	100	88,143	119,933	12
840,390	4,779,126	2,819,082	1,539,644	4,745,397	5,422,178	3,659,093	11,033,167	13
39,312	408,203	232,192	58,379	321,635	538,304	165,685	841,401	
209,541	219,005	1,500	21,960	25,595	7,200	116,000	132,875	14
56,964	59,747	396	4,590	5,419	360	8,120	11,033	
9,078,427	**19,841,366**	**232,971**	**1,999,256**	**4,039,968**	**538,764**	**1,085,173**	**3,229,339**	
1,343,591	1,343,591	–	3,615,835	3,615,835	–	2,494,062	2,494,062	15
3,473,610	3,473,610	–	6,564,372	6,564,372	–	5,500,547	5,500,547	
842,035	932,406	54,454	357,313	424,530	43,175	409,381	554,726	16
2,558	113,020	48	2,688	125,838	–	1,358	98,071	17
131,152	131,152	–	11,122	11,122	–	–	–	18
197,416	197,416	–	3,396	3,396	–	–	–	
162,763	179,398	4,076	19,435	31,287	29,035	14,585	58,300	19
3,712,979	4,210,594	96,911	347,104	650,379	500,881	161,065	927,143	
26,976	75,308	769,283	–	780,515	621,299	130	636,719	20
20,226	55,433	377,123	–	379,668	216,653	20	217,807	
15,538	35,272	22,840	27,458	50,955	–	15,588	15,944	21
4,298	9,123	5,717	7,013	12,860	–	4,811	4,896	
88,971	97,074	497	83,666	87,025	862	211,621	215,944	22
67,532	71,532	1,833	39,249	44,156	10,376	74,048	87,232	23
39,724	47,632	–	21,831	33,389	180	28,553	47,931	24
236,834	268,363	10,564	156,683	181,894	18,984	363,210	415,018	25
252,863	283,830	7,469	108,097	124,748	12,655	244,543	281,032	
6,909	7,042	140	2,424	2,826	225	12,828	13,297	26
69,979	72,181	2,285	21,256	27,674	3,807	80,601	87,055	
64,761	72,882	–	64,322	66,957	–	176,197	178,056	27
21,721	25,220	–	20,406	21,848	–	49,718	50,616	
54,222	69,617	111,394	112,068	305,890	8,900	119,871	249,405	28
146,539,883	**482,140,444**	**196,199,365**	**47,587,209**	**317,578,963**	**268,828,862**	**41,891,873**	**407,760,092**	

[1]Unrevised figures.

12.—Exports of Canada to United Kingdom, United States and All Countries in quan-

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	1919. United Kingdom.
	II. Animals and Animal Products (except chemicals and fibres).					
	Animals, living, for improvement of stock—					
1	Cattle	No.	–	2,272	2,827	–
		$	–	1,025,624	1,078,874	–
2	Poultry	No.	53	8,907	8,986	28
		$	590	52,155	53,245	450
3	Sheep	No.	–	2,155	2,159	–
		$	–	109,403	109,463	–
4	Swine	No.	–	140	144	–
		$	–	9,841	9,941	–
	Other animals, living—					
5	Cattle, one year old or less, n.o.p.	No.	–	84,260	84,397	–
		$	–	1,769,518	1,771,072	–
6	Cattle, over one year old, n.o.p.	No.	479	415,956	431,128	131
		$	70,200	41,226,445	43,214,685	19,350
7	Horses	No.	173	2,725	3,889	50
		$	36,045	493,638	708,137	11,100
8	Poultry, n.o.p.	No.	–	603,384	604,117	–
		$	–	612,459	613,391	–
9	Sheep, n.o.p.	No.	–	178,524	180,550	–
		$	–	1,979,361	1,999,499	–
10	Swine, n.o.p.	No.	–	4,294	4,949	–
		$	–	162,298	170,298	–
11	All other animals, living, n.o.p.	$	325	276,881	297,553	4,050
	Total animals, living	$	**107,160**	**47,717,623**	**50,026,158**	**34,959**
12	Bones, horns, hoofs and their products	$	–	341,342	351,733	–
	Fishery products, n.o.p.—					
13	Codfish, haddock, ling and pollock, fresh	cwt.	2,682	68,151	71,142	–
		$	26,470	327,841	357,566	–
14	Codfish, dry salted	cwt.	1,509	250,834	752,340	1,678
		$	19,273	2,509,198	9,178,857	15,122
15	Codfish, wet salted and pickled	cwt.	–	243,899	244,730	–
		$	–	1,447,499	1,454,650	–
16	Codfish, smoked	cwt.	1,765	11,575	14,296	–
		$	16,241	112,352	144,187	–
17	Codfish, boneless, canned, etc.	cwt.	2,019	21,455	26,360	79
		$	33,182	289,738	367,144	4,054
	Total codfish	$	**95,166**	**4,686,628**	**11,502,404**	**19,176**
18	Halibut, fresh	cwt.	–	32,504	32,590	–
		$	–	474,456	476,140	–
19	Herring, fresh or frozen	cwt.	–	336,076	336,106	–
		$	–	814,391	814,621	–
20	Herring, pickled	cwt.	391	83,359	192,325	–
		$	1,563	400,011	827,482	–
21	Herring, canned	cwt	1	1,324	35,646	–
		$	7	13,967	470,968	–
22	Herring, smoked	cwt.	1	62,894	73,747	17
		$	20	426,570	521,038	83
23	Herring, sea, dry salted	cwt.	–	40,834	448,251	–
		$	–	59,100	775,289	–
	Total herring	$	**1,590**	**1,714,039**	**3,409,498**	**83**
24	Lobsters, fresh	cwt.	–	42,707	42,707	–
		$	–	848,421	848,421	–
25	Lobster, canned	cwt.	26,887	17,716	59,246	23,446
		$	1,988,364	1,073,454	4,083,678	2,006,994
	Total lobsters	$	**1,988,364**	**1,912,875**	**4,932,099**	**2,006,994**
26	Mackerel, fresh	cwt.	–	52,295	52,295	–
		$	–	483,955	483,955	–
27	Mackerel, pickled	cwt.	–	74,703	91,661	–
		$	–	800,297	948,634	–
	Total mackerel	$	–	**1,284,252**	**1,432,589**	–

tities and values by classes of home produce in the four fiscal years 1920-1923—con.

1921.		1922.			1923[1].			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
1,270	1,342	–	664	667	–	498	542	1
616,337	635,662	–	267,980	272,085	–	117,422	128,072	
12,013	12,332	79	8,254	8,444	50	6,270	6,581	2
63,091	64,897	895	56,687	58,033	792	48,661	50,877	
1,027	1,085	–	1,011	1,023	–	629	629	3
64,055	66,025	–	34,217	34,417	–	24,262	24,262	
62	69	–	66	75	–	438	448	4
6,778	7,323	–	3,910	4,251	–	16,256	17,171	
72,731	72,822	–	51,257	51,334	–	29,125	29,355	5
1,473,222	1,474,521	–	413,188	413,855	–	257,529	262,161	
221,278	223,689	35,418	121,060	161,483	25,758	199,272	229,080	6
19,759,329	19,989,370	4,139,391	3,299,633	7,852,111	2,809,786	5,609,998	8,738,243	
2,925	3,626	–	2,129	2,251	–	1,477	1,863	7
651,129	780,977	–	517,518	535,428	–	220,893	278,178	
706,806	707,303	–	839,753	840,450	–	596,427	597,200	8
780,510	781,289	–	797,481	798,401	–	541,339	542,241	
183,634	185,382	1,178	97,119	100,350	–	73,691	75,154	9
1,700,992	1,717,734	13,230	535,612	562,452	–	463,988	473,798	
329	1,179	–	2,449	3,109	–	1,184	1,857	10
5,333	14,202	–	60,059	67,548	–	21,896	28,038	
326,457	351,672	315	484,286	486,906	4,782	771,128[2]	777,925[3]	11
25,447,233	**25,883,663**	**4,153,831**	**6,470,571**	**11,085,487**	**2,815,370**	**8,093,372**	**11,320,966**	
319,668	320,505	–	82,582	84,357	560	126,977	134,431	12
46,261	46,270	234	41,302	41,566	–	12,739	13,268	13
203,119	203,245	1,110	154,001	155,557	–	53,169	56,729	
96,217	553,918	761	148,335	780,063	437	132,533	679,869	14
957,074	6,049,377	4,259	1,002,734	6,113,206	3,381	974,629	5,283,636	
145,931	146,312	–	154,900	156,949	–	138,262	140,716	15
830,508	834,187	–	658,004	669,875	–	562,507	575,018	
13,960	14,444	124	13,850	14,348	9	13,499	13,967	16
147,526	154,807	1,282	139,750	146,541	90	121,667	127,451	
16,345	18,090	–	13,889	14,022	–	14,585	14,731	17
231,478	262,735	16	160,034	162,028	–	151,953	153,556	
2,369,705	**7,504,351**	**6,667**	**2,114,523**	**7,247,207**	**3,471**	**1,863,925**	**6,196,390**	
55,636	55,695	941	65,165	66,339	–	56,354	56,559	18
912,046	913,085	16,690	835,166	854,992	–	751,482	753,667	
377,679	377,089	–	213,267	213,312	–	274,738	274,818	19
1,058,039	1,058,124	–	396,607	396,860	–	483,372	482,779	
40,015	124,873	–	51,475	108,182	–	35,855	89,894	20
177,055	496,232	–	212,152	398,689	–	116,201	263,908	
1,545	20,588	6	457	11,740	76	563	16,757	21
18,710	274,354	79	3,880	93,339	404	4,566	144,590	
54,963	65,074	–	26,219	47,085	62	52,955	66,851	22
313,364	389,791	–	109,153	201,064	443	192,177	254,056	
7,812	561,675	–	40	643,574	8	17	642,229	23
16,282	991,309	–	453	1,000,427	47	127	1,031,601	
1,583,450	**3,209,810**	**79**	**722,245**	**2,090,379**	**894**	**796,443**	**2,177,934**	
52,643	52,643	–	72,926	72,926	–	42,252	42,252	24
1,033,738	1,033,738	–	1,403,257	1,403,257	–	1,041,713	1,041,713	
31,462	66,585	33,249	15,691	72,440	33,358	20,205	76,227	25
2,230,293	5,179,569	1,797,467	736,521	3,756,443	2,143,779	1,215,854	4,807,714	
3,264,131	**6,213,307**	**1,797,467**	**2,139,778**	**5,159,700**	**2,143,779**	**2,257,567**	**5,849,427**	
48,141	48,141	–	58,915	58,915	16	104,868	104,884	26
573,712	573,712	–	560,074	560,074	96	858,143	858,239	
28,410	61,298	–	29,651	44,066	–	44,906	70,385	27
293,454	564,228	–	268,061	383,617	–	397,483	529,819	
867,166	**1,137,940**	**–**	**828,135**	**943,691**	**96**	**1,255,626**	**1,388,058**	

[1] Unrevised figures.
[2] Includes animals for exhibition purposes valued at $316,358.
[3] Includes animals for exhibition purposes valued at $317,258.

12.—Exports of Canada to United Kingdom, United States and All Countries in quan-

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	1919. United Kingdom.
	II.—Animals and Animal Products (except chemicals and fibres)—con.					
	Fishery products, n.o.p.—concluded.					
1	Oysters	$	79	12,236	12,548	–
2	Salmon, fresh and frozen	cwt.	4,648	307,555	312,419	2,004
		$	94,438	1,321,679	1,420,171	60,460
3	Salmon, smoked	cwt.	–	97	143	40
		$	–	1,626	2,710	640
4	Salmon, canned	cwt.	310,451	62,248	615,288	168,657
		$	7,582,373	681,547	12,067,319	5,584,566
5	Salmon, dry salted (chum)	cwt.	–	7,733	27,277	–
		$	–	26,419	71,051	–
6	Salmon, pickled	cwt.	467	8,976	12,457	173
		$	5,120	170,000	208,293	4,904
7	Salmon or lake trout	cwt.	–	28,729	28,739	–
		$	–	298,596	298,696	–
8	Sea fish, other, fresh	cwt.	–	4,850	4,886	–
		$	–	35,370	35,535	–
9	Sea fish, other, pickled	cwt.	–	53	344	50
		$	–	462	1,789	600
10	Sea fish, other, preserved	cwt.	453	819	1,632	–
		$	7,253	18,238	33,570	–
11	Smelts	cwt.	–	61,995	61,995	–
		$	–	763,942	763,942	–
12	Fish, bait	$	–	23,650	24,592	–
13	Fish, all other	$	18,319	3,032,170	3,050,489	–
14	Tullibee	cwt.	–	49,875	49,875	–
		$	–	312,723	312,723	–
	Total fish	$	**9,815,979**	**17,189,25**	**49,687,172**	**7,679,338**
15	Other fishery products	$	20,229	237,631	289,575	3,085
	Total fishery products, n.o.p.	$	**9,836,208**	**17,417,881**	**40,976,747**	**7,682,423**
	Furs, hides, leather and their products—					
16	Furs, dressed	$	35,532	33,180	94,688	20,701
	Furs, undressed—					
17	Beaver skins	No.				42,103
		$				1,002,343
18	Fox skins, black and silver	No.				546
		$				143,334
19	Fox skins, other	No.				8,937
		$				341,539
20	Marten skins	No.				14,361
		$	3,939,539	16,540,822	20,628,109	446,181
21	Mink skins	No.				25,406
		$				281,976
22	Muskrat skins	No.				390,748
		$				737,715
23	Seal skins	No.				875
		$				20,962
24	Fur skins, n.o.p.	$				535,634
25	Furs, manufactured	$	83,846	20,532	199,174	146,078
	Total furs	$	**4,058,917**	**16,494,534**	**20,921,971**	**3,676,493**
26	Hides and skins, n.o.p.	$	6,176	19,738,006	19,762,646	17,874
	Leather, unmanufactured—					
27	Harness, leather	$	2,046	816,957	834,909	3,655
28	Sole leather	lb.	3,979,583	924,379	5,524,409	237,369
		$	1,613,398	729,103	2,773,642	184,151
29	Upper leather	$	4,529,964	2,182,668	7,421,047	2,189,945
30	Other unmanufactured leather	$	144,403	515,553	712,670	63,178
	Leather, manufactured—					
31	Boots and shoes	$	2,754,076	350,874	5,679,720	904,078
32	Harness and saddlery	$	574	98,946	109,101	3,564
33	Other manufactures of leather	$	188,691	164,623	526,063	23,543
	Total leather	$	**9,233,152**	**4,858,724**	**18,057,152**	**3,372,114**
34	Hair	$	–	332,112	339,785	195
	Meats, fresh—					
35	Beef, fresh	cwt.	287,305	344,180	1,038,995	88,838
		$	4,873,257	5,892,484	18,868,069	1,262,349
36	Mutton and lamb, fresh	cwt.	3,208	46,586	61,401	–
		$	51,887	1,027,172	1,314,573	–
37	Pork, fresh	cwt.	–	12,844	15,250	2,948
		$	–	268,827	322,384	75,738
38	Poultry and game, dressed or undressed	$	236,643	129,648	430,728	12,763
	Meats cured, canned or otherwise prepared—					
	Bacon and hams, shoulders and sides	cwt.	2,209,456	14,798	2,236,426	974,228
		$	69,293,178	424,639	70,123,580	31,201,380

tities and values by classes of home produce in the four fiscal years 1920-1923—con.

1921.		1922.			1923.[1]			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
5,961	6,369	36	3,799	4,396	–	1,189	1,504	1
75,635	87,168	8,875	96,830	106,702	7,150	89,142	96,773	2
656,380	743,812	244,436	735,064	993,373	149,018	778,152	934,172	
87	135	–	115	647	–	2,049	2,111	3
1,517	2,344	–	1,951	7,306	5	47,710	48,588	
12,285	308,578	159,004	5,449	436,239	62,284	5,920	321,969	4
237,018	7,580,977	3,473,776	18,457	6,433,252	1,358,405	178,967	4,489,509	
226	56,873	–	5,082	84,234	–	143	133,348	5
2,295	131,160	–	8,768	221,588	–	1,132	376,776	
8,979	10,978	5	9,521	14,570	10	16,857	22,276	6
183,568	207,367	50	181,278	231,355	294	347,007	399,460	
29,842	29,842	–	31,141	31,141	–	31,071	31,071	7
363,758	363,758	–	346,569	346,569	–	304,194	304,194	
12,008	12,008	–	4,156	4,193	–	31,860	32,108	8
31,080	31,080	–	29,575	29,953	–	32,871	34,557	
159	209	18	375	470	–	136	193	9
1,332	1,932	90	1,649	2,105	–	643	1,438	
475	489	2	108	112	238	267	1,252	10
9,692	9,904	150	1,856	2,030	11,100	4,073	22,311	
59,921	59,921	–	82,655	82,655	–	56,446	56,446	11
774,359	774,359	–	1,064,388	1,064,388	–	803,009	803,009	
50,874	51,285	–	65,405	65,405	–	41,000	41,000	12
3,330,229	3,330,229	1,457	3,336,308	3,523,044	4,792	3,429,920	3,561,120	13
63,293	63,293	–	33,979	33,979	–	24,868	24,868	14
324,858	324,858	–	118,844	118,844	–	119,354	119,354	
15,286,647	**33,130,003**	**5,549,898**	**12,572,061**	**29,339,887**	**3,671,851**	**13,014,288**	**27,532,468**	
197,123	200,361	100	34,133	41,070	3,348	42,743	55,249	15
15,483,170	**33,330,364**	**5,549,998**	**12,606,194**	**29,380,957**	**3,675,202**	**13,057,031**	**27,557,717**	
39,309	168,215	13,119	13,955	41,013	24,548	48,194	86,053	16
106,684	150,190	51,257	144,636	195,943	59,104	154,304	213,806	17
2,136,864	3,185,934	1,002,800	2,680,015	3,682,815	1,000,798	3,045,632	4,152,173	
3,600	4,471	860	4,948	5,902	1,557	3,264	5,051	18
648,548	888,104	172,704	865,763	1,053,933	202,567	332,476	557,834	
20,106	30,621	15,492	26,907	42,728	14,493	49,184	64,598	19
434,183	845,290	475,862	476,193	959,402	447,623	864,165	1,327,782	
28,403	42,987	19,658	34,102	53,825	14,056	26,226	40,420	20
838,824	1,296,110	551,844	878,060	1,431,071	307,886	587,433	898,454	
71,673	97,125	43,133	127,561	171,340	47,362	137,980	187,355	21
759,814	1,042,341	506,478	1,270,564	1,785,764	455,374	1,094,782	1,574,532	
860,442	1,253,553	629,420	1,705,787	2,347,389	934,226	2,362,006	3,348,397	22
1,630,874	2,379,855	943,702	2,403,952	3,365,286	1,600,387	3,527,784	5,198,682	
2,351	3,613	2,458	1,798	4,256	723	2,741	3,464	23
10,914	33,736	52,098	4,400	56,498	10,571	13,883	24,454	
1,472,232	2,059,691	548,081	1,882,044	2,460,568	618,780	1,824,359	2,472,314	24
35,938	331,168	62,773	51,301	141,849	17,225	36,482	92,466	25
8,007,500	**12,230,444**	**4,329,461**	**10,526,247**	**14,978,199**	**4,785,759**	**11,375,190**	**16,384,744**	
4,708,612	4,732,207	47,686	3,936,788	4,027,427	62,173	7,226,747	7,399,951	26
416,559	435,076	25,031	330,513	360,248	1,146	662,290	668,072	27
828,859	1,391,510	1,738,903	3,715,634	5,614,385	542,831	3,138,187	4,051,657	28
429,568	870,183	516,140	1,126,450	1,710,518	176,098	1,014,446	1,343,830	
797,284	3,397,075	1,149,446	1,125,604	2,344,024	772,792	1,692,469	2,581,129	29
337,678	436,094	7,530	304,831	350,410	4,251	124,092	131,360	30
276,015	1,441,338	82,764	162,859	272,346	16,740	65,453	130,034	31
119,423	144,786	155	31,194	34,359	116	21,231	27,475	32
276,196	356,817	5,247	84,010	99,880	24,286	111,432	150,686	33
2,652,723	**7,081,369**	**1,786,313**	**3,165,461**	**5,171,785**	**995,429**	**3,691,413**	**5,032,586**	
226,105	226,365	1,453	135,522	136,975	2,127	249,645	255,241	34
358,383	519,994	57,973	216,478	283,566	79,878	182,640	290,285	35
5,829,181	8,331,298	662,313	2,550,093	3,324,037	530,031	2,156,747	2,932,573	
62,421	64,055	7,730	69,988	78,970	–	35,022	36,101	36
1,595,111	1,626,792	122,177	1,198,783	1,342,146	–	827,426	847,233	
9,338	16,014	759	7,146	10,493	1,034	5,486	7,586	37
316,151	493,220	14,000	175,478	229,442	17,576	145,021	179,731	
523,128	585,859	127,575	750,490	916,347	122,254	629,183	815,317	38
5,997	982,338	986,623	1,404	992,080	1,008,183	1,680	1,015,901	39
203,960	31,492,407	22,873,449	47,991	23,012,480	29,364,762	44,257	22,536,397	

[1] Unrevised figures.

12.—Exports of Canada to United Kingdom, United States and All Countries in quan-

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	United Kingdom.
	II. Animals and Animal Products—concluded. (Except chemicals and fibres.)					
	Meats cured, canned or otherwise prepared—con.					
1	Beef, pickled, in barrels	cwt.	1,077	2,001	61,483	-
		$	23,825	30,354	769,587	-
2	Canned meats, n.o.p	lb.	2,347,122	112,879	2,812,706	283,732
		$	993,858	27,845	1,102,842	168,101
3	Extracts of fluid beef	lb.	180	15,666	17,078	10,642
		$	190	9,960	12,105	7,732
4	Pork, dry salted	cwt.	14,746	8,859	39,497	1,096
		$	453,578	226,757	1,069,882	33,676
5	Pork, pickled, in barrels	cwt.	657	3,188	12,076	44
		$	18,282	69,490	249,304	1,160
6	All other meats, n.o.p	lb.	8,626,310	2,897,004	15,644,056	3,107,218
		$	1,119,799	371,889	1,898,180	399,165
	Total meats	$	**77,064,497**	**8,479,065**	**96,161,234**	**33,162,064**
	Milk and its products—					
7	Cream	gal.	-	795,780	795,780	-
		$	-	1,122,424	1,122,424	-
8	Milk, fresh	gal.	-	1,985,113	1,985,113	-
		$	-	576,666	576,666	-
9	Butter	lb.	3,932,674	10,693,311	17,612,605	2,098,716
		$	2,323,479	5,712,727	9,844,359	1,016,935
10	Cheese	lb.	89,977,759	6,031,404	126,395,777	122,652,290
		$	25,720,370	1,575,264	36,336,863	34,024,595
11	Milk, condensed, canned or preserved, etc.	lb.	30,941,398	15,466,673	54,247,498	21,904,938
		$	5,031,162	2,214,166	8,517,771	3,644,723
	Total milk and its products	$	**33,075,011**	**11,201,247**	**56,398,083**	**38,686,253**
	Oils, fats, greases and waxes—					
12	Animal oils, neat's foot, etc	gal.	38,743	31,596	94,376	13,262
		$	119,515	79,577	242,893	39,667
13	Cod liver oil	gal.	10,306	365,982	379,972	-
		$	11,457	366,397	384,097	-
14	Seal oil	gal.	21,602	14,068	35,670	-
		$	34,866	14,621	49,487	-
15	Whale oil	gal.	2,839	509,783	557,299	-
		$	4,924	638,007	682,365	-
16	Other fish oil	gal.	730	155,623	157,153	-
		$	650	123,337	124,482	-
	Other fats, greases and waxes—					
17	Grease and grease scraps	cwt.	10,231	65,431	80,436	113
		$	137,289	506,143	732,187	2,149
18	Lard	cwt.	45,579	11,379	76,218	12,612
		$	1,522,018	321,248	2,428,138	202,990
19	Lard compounds and substitutes	cwt.	-	1,330	1,584	86
		$	-	21,023	28,503	2,424
20	Tallow	cwt.	13,099	43,039	64,831	-
		$	195,912	653,085	999,585	-
21	Wax	lb.	20,203	117,412	155,601	24,356
		$	8,984	57,954	73,904	6,594
	Total oils, fats, greases and waxes	$	**2,035,615**	**5,781,392**	**5,745,641**	**253,824**
	Other animal products—					
22	Eggs	doz.	5,679,510	131,999	6,000,528	6,266,169
		$	3,309,364	70,514	3,496,827	4,229,608
23	Glue and glue stock	$	1,783	122,529	124,915	2,770
24	Honey	lb.	3,615	26,236	33,142	60
		$	878	6,000	7,632	20
25	Sausage casings	$	118,477	298,389	564,222	138,682
26	Tails	$	-	30,902	30,902	-
27	Tankage	cwt.	-	357,438	357,438	-
		$	-	890,811	890,811	-
28	Other animal products, n.o.p	$	38,756	115,846	161,385	33,311
	Total Animals and Animal Products (except chemicals and fibres)	$	**138,825,994**	**130,997,017**	**314,017,944**	**91,291,301**

tities and values by classes of home produce in the four fiscal years 1920-1923—con.

1921.		1922.			1923.[1]			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
1,994	15,072	37	4	483	–	247	1,173	1
29,764	173,291	512	46	5,676	–	4,175	9,172	
85,739	437,239	690,004	3,446	708,321	163,276	–	179,632	2
35,287	220,437	207,583	1,288	213,397	52,969	–	56,151	
6,891	20,987	–	2,273	2,561	–	2,650	13,751	3
4,070	13,873	–	3,510	3,606	–	5,694	223,056	
394	9,125	2,087	600	12,345	10,743	–	13,751	4
6,599	198,502	33,534	5,965	155,587	222,938	–	223,056	
806	6,118	–	331	6,410	–	19	5,368	5
15,246	110,750	–	1,908	68,679	–	333	48,895	
2,568,483	11,060,647	3,136,585	1,180,551	5,836,288	3,231,479	1,425,713	7,194,298	6
439,605	1,255,091	304,239	163,930	555,150	222,421	224,177	590,267	
8,398,102	**44,501,520**	**24,345,322**	**4,899,482**	**29,826,547**	**23,533,221**	**4,037,013**	**28,244,661**	
1,279,195	1,279,195	–	1,671,678	1,671,678	–	1,712,241	1,712,241	7
1,987,461	1,987,461	–	2,479,080	2,479,080	–	2,793,937	2,793,937	
1,508,618	1,508,618	–	1,391,299	1,391,299	–	856,039	856,039	8
412,916	412,916	–	311,922	311,922	–	189,301	189,301	
5,993,786	9,739,414	3,713,709	3,032,939	8,430,591	17,527,607	2,423,086	21,994,578	9
3,156,951	5,128,831	1,444,657	1,080,357	3,224,390	6,429,378	979,888	8,243,138	
641,950	133,620,340	125,942,940	2,969,750	133,849,760	106,550,400	5,902,300	114,548,900	10
184,883	37,146,722	24,007,726	464,189	25,440,322	19,428,127	984,084	20,828,234	
14,919,288	49,147,451	16,180,302	4,894,690	34,042,679	11,176,488	7,298,416	30,309,152	11
2,352,319	8,187,937	2,276,575	844,888	5,085,110	1,006,168	895,305	3,244,913	
8,094,530	**52,863,367**	**27,728,958**	**5,141,848**[2]	**36,542,237**[2]	**26,863,673**	**5,843,796**[2]	**35,300,304**[2]	
50	16,440	8,112	6,255	136,132	1,267	1,231	62,193	12
1,071	45,947	14,987	2,992	146,355	4,593	385	69,680	
90,231	98,303	211	199,213	203,823	–	217,362	221,640	13
82,073	87,427	105	77,950	79,942	–	101,228	102,859	
2,298	2,298	–	8,609	18,393	–	9,414	9,434	14
2,349	2,349	–	4,808	12,116	–	4,114	4,134	
78,542	78,542	–	65,357	65,357	145,096	108,290	253,386	15
95,454	95,454	–	27,108	27,108	71,669	31,771	103,440	
96,462	96,462	–	101,235	101,825	–	74,337	74,359	16
65,789	65,789	–	21,372	21,771	–	24,315	24,328	
21,170	21,672	1,246	38,349	40,760	301	23,148	26,836	17
104,579	108,917	7,830	152,954	169,126	2,104	93,909	123,898	
1	30,961	32,530	19	47,959	30,667	134	42,633	18
15	617,334	471,266	241	686,394	442,988	1,641	595,115	
22	2,334	–	–	11,850	1,746	–	29,071	19
511	57,095	–	–	156,373	21,300	–	376,070	
18,512	18,964	44	15,653	16,426	–	14,092	14,639	20
165,396	172,146	351	77,525	82,806	–	108,016	111,915	
76,471	102,173	10,288	34,320	45,643	–	16,276	16,523	21
37,270	44,267	2,160	7,766	10,276	–	3,682	3,736	
554,507	**1,286,725**	**496,699**	**372,716**	**1,392,267**	**542,654**	**369,064**	**1,515,178**	
191,258	6,579,853	3,917,870	311,271	4,399,534	3,158,070	290,489	3,613,531	22
118,513	4,425,856	1,839,880	126,851	2,039,352	1,251,010	98,191	1,410,444	
141,728	145,599	1,086	123,536	125,100	126	59,990	61,225	23
36,164	36,929	1,245	70,590	74,107	7,130	54,819	116,353	24
8,996	9,195	162	12,268	12,840	1,091	8,554	13,520	
296,069	579,674	93,755	305,595	536,803	94,393	322,593	531,651	25
18,329	18,229	–	9,413	9,413	–	22,398	22,488	26
232,641	232,681	–	256,877	260,377	–	291,764	291,986	27
554,506	554,706	–	308,060	314,396	–	491,894	492,655	
120,755	159,549	3,359	128,220	134,578	5,473	151,308	163,377	28
75,751,046	**188,359,957**	**70,368,963**	**48,391,355**	**135,798,720**	**64,628,291**	**55,225,166**	**135,841,642**	

[1] Unrevised figures.
[2] Includes casein valued at $1,413 in 1922 and $1,281 in 1923

12.—Exports of Canada to United Kingdom, United States and All Countries in quan-

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	United Kingdom.
	III. Fibres, Textiles and Textile Products.					
	Cotton and its products—					
1	Cotton waste	cwt.	5,230	3,695	9,858	–
		$	109,245	63,919	188,679	–
2	Cotton clothing	$	666,654	7,806	2,885,887	343,799
3	Cotton fabrics and cotton duck	yd.	469,698	718,746	9,949,981	209,276
		$	409,242	141,927	2,683,273	274,093
4	Manufactures of cotton, n.o.p.	$	59,193	170,439	390,838	71,626
	Total cotton and its products	$	**1,244,334**	**384,091**	**6,148,697**	**689,518**
	Flax, hemp, jute and their products—					
5	Flax fibre and flax tow	$	345,465	982,422	1,439,898	580,863
6	Other articles	$	393	83,186	117,025	6,841
	Total flax, hemp, etc.	$	**345,858**	**1,065,608**	**1,556,923**	**587,704**
7	Silk and its products	$	49,128	41,245	176,461	158,710
	Wool and its products—					
8	Wool	lb.	195,081	8,859,682	9,084,727	130,619
		$	149,237	5,293,522	5,472,236	54,856
9	Clothing, wool, knitted	$	129,343	561,537	1,932,954	82,819
10	Clothing, wool, n.o.p.	$	299,247	110,948	4,073,333	86,746
11	Woollens, n.o.p.	$	426,626	272,879	5,481,202	59,198
	Total wool and its products	$	**1,004,453**	**6,238,88**	**16,959,725**	**283,619**
	Vegetable fibres and their products—					
12	Binder twine	cwt.	8,005	142,699	280,915	17,831
		$	128,013	3,037,525	5,530,908	227,939
	Mixed textile products.—					
13	Rags	$	684,657	934,213	1,633,179	276,406
14	Cordage, ropes and twine	$	48,254	35,772	179,534	9,858
15	Felt, manufactures of	$	2,191	33,308	52,947	8,142
16	Oilcloths, all kinds	sq. yd.	113,890	318	299,200	–
		$	29,047	180	112,140	–
17	Sails, awnings, tents and tarpaulins	$	1,515	1,825	9,216	1,380
	Wearing apparel, n.o.p.—					
18	Braces or suspenders	$	147,772	25	230,285	199,308
19	Corsets and parts of	$	85,246	202	430,830	182,051
20	Gloves and mitts	$	20,252	622,043	658,450	2,014
21	Hats and caps	$	10,455	2,251	64,831	2,353
22	Clothing and wearing apparel, n.o.p.	$	2,544	3,102	36,732	1,445
23	Other articles	$	47,638	72,180	247,456	12,755
	Total fibres, textiles and textile products	$	**3,851,357**	**12,472,456**	**34,028,314**	**2,643,202**
	IV. Wood, Wood Products and Paper.					
24	Books and printed matter	$	122,555	353,344	603,318	187,603
	Paper—					
25	Bags, boxes and cartons	$	5,083	3,532	69,407	4,288
26	Bond and writing paper	cwt.	899	145	27,157	5,913
		$	8,319	1,545	315,481	72,261
27	Book paper	cwt.	3,911	–	47,573	6,860
		$	29,697	–	436,530	81,011
28	Hangings or wall paper	roll	631,431	25,011	3,159,118	509,160
		$	70,059	2,898	324,149	134,323
29	Printing paper	cwt.	467,372	12,553,349	14,272,513	88,849
		$	1,700,965	46,809,178	53,203,792	444,130
30	Paper board	$	1,661,218	2,559,291	4,568,066	2,065,845
31	Roofing paper, all kinds	$	51,453	230,313	592,875	12,860
32	Wrapping paper	cwt.	154,063	44,897	362,682	90,365
		$	1,200,525	354,306	2,917,197	966,616
33	Other paper and mfs. of	$	86,258	406,273	826,122	64,094
	Total paper	$	**4,813,577**	**59,367,339**	**63,253,419**	**3,845,428**

tities and values by classes of home produce in the four fiscal years 1920-1923—con.

1921.		1922.			1923.[1]			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
887	1,014	–	1,065	1,195	134	5,935	6,156	1
17,302	18,890	–	8,884	10,250	3,076	69,395	73,112	
29,697	1,728,166	99,498	1,486	217,902	85,235	1,493	366,262	2
20,029	1,734,619	46,870	77,341	583,976	78,829	62,797	900,806	3
22,210	783,072	24,735	126,000	289,245	28,165	35,759	339,315	
112,606	313,289	30,739	230,032	382,872	18,222	63,048	115,021	4
181,815	**2,843,417**	**154,972**	**367,002**	**900,269**	**134,698**	**169,695**	**893,710**	
404,059	1,298,329	100,643	62,702	167,865	62,539	260,020	331,488	5
25,045	57,692	4,503	7,372	14,174	8,472	2,316	17,176	6
429,104	**1,356,021**	**105,146**	**70,074**	**182,039**	**71,011**	**262,336**	**348,664**	
23,543	343,077	128,707	13,308	209,715	135,823	35,750	391,015	7
7,128,065	7,288,373	16,033	1,011,270	1,034,433	32,747	8,614,609	8,667,400	8
2,094,691	2,168,256	2,396	235,563	242,045	16,448	2,341,330	2,363,931	
119,273	564,425	23,576	43,886	186,515	2,326	20,480	171,630	9
154,830	1,212,246	4,474	98,774	139,994	1,082	41,058	58,688	10
389,258	3,905,576	12,081	525,469	601,107	2,629	137,638	161,185	11
2,738,052	**7,850,503**	**42,527**	**903,692**	**1,169,661**	**22,485**	**2,540,506**	**2,755,434**	
165,184	186,124	14,767	6,811	33,693	8,371	48,062	75,199	12
2,924,198	3,192,174	194,178	107,021	431,128	73,997	533,372	777,354	
669,859	951,135	85,957	487,364	608,119	189,842	824,399	1,054,042	13
26,022	185,924	11,135	13,420	79,164	14,996	19,879	83,655	14
19,743	101,401	6,830	8,333	87,726	32,009	15,151	224,058	15
59	83,942	–	440	58,203	6,365	20	103,141	16
28	47,169	–	335	24,934	1,168	15	36,807	
5,169	11,711	–	1,470	3,271	–	382	6,211	17
91	287,071	32,223	1,690	47,266	24,597	5	60,997	18
22,991	1,250,567	233,598	159	709,722	272,249	323	816,911	19
513	26,833	252	93	29,712	17,270	60	138,297	20
7,774	130,438	6,988	1,759	22,234	3,386	996	29,049	21
550	27,144	–	2,653	5,854	–	69	577	22
53,430	179,299	18,099	18,261	75,173	84,445	29,829	234,062	23
7,122,882	**18,783,884**	**1,020,612**	**1,996,634**	**4,585,987**	**1,077,976**	**4,432,767**	**7,850,843**	
557,317	941,209	93,672	351,069	622,501	135,658	375,830	656,499	24
7,646	123,952	7,042	12,316	71,487	4,728	2,813	63,561	25
10	60,558	–	307	6,497	1,857	480	18,439	26
134	989,068	–	3,286	84,125	22,604	5,193	194,280	
1,438	65,194	280	42	17,362	1,137	65	43,6..6	27
11,514	779,763	4,681	689	201,764	10,362	480	298,596	
70,861	5,108,287	314,106	49,601	2,359,284	548,231	64,017	2,284,781	28
17,078	831,772	68,055	10,664	445,536	72,419	12,297	329,308	
13,376,836	15,112,586	54,028	14,106,128	15,138,327	222,963	18,836,245	20,130,455	29
68,792,519	78,922,137	222,355	59,891,120	64,635,627	762,245	67,742,776	72,667,826	
2,423,495	5,267,842	694,642	1,217,403	2,306,525	666,202	1,534,250	2,411,233	30
106,740	354,690	29,759	65,709	168,155	3,982	101,139	194,210	31
18,929	340,946	46,572	2,017	162,625	149,503	53,245	391,100	32
165,291	3,672,780	388,504	16,540	1,264,654	1,214,237	255,248	2,887,376	
645,712	1,161,303	9,888	263,067	355,545	47,892	400,060	521,551	33
72,170,129	**92,103,307**	**1,424,926**	**61,480,794**	**69,533,418**	**2,804,671**	**70,054,256**	**79,567,941**	

[1]Unrevised figures.

12.—Exports of Canada to United Kingdom, United States and All Countries in quan-

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	United Kingdom.
	IV. Wood, Wood Products and Paper—concluded.					
	Logs and round timber—					
1	Fence posts	$	–	163,926	163,926	–
2	Logs, cedar	M ft.	–	22,477	22,861	–
		$	–	526,377	547,815	–
3	Logs, hardwood	$	60,529	166,669	228,598	95,504
4	Logs, spruce	$	300	179,728	181,263	284
5	Logs, all other, n.o.p	$	208,838	650,205	861,407	305,004
6	Masts and spars	$	–	1,069	26,404	–
7	Piling	Lin. ft.	–	1,145,135	1,188,995	–
		$	–	112,894	118,656	–
8	Poles, hop, hoop, telegraph and other	$	–	204,066	209,286	–
9	Railroad ties	No.	910,467	325,512	1,235,979	912,136
		$	814,893	289,909	1,104,802	1,303,196
	Saw-mill and planing mill products—					
10	Planks and boards	M ft.	703,765	1,301,565	2,085,262	428,059
		$	26,996,484	44,874,541	75,216,193	20,449,773
11	Timber, square, Douglas fir	M ft.	10,498	693	26,078	3,391
		$	330,695	18,194	777,177	169,459
12	Timber, square, white pine	M ft.	9,557	114	9,671	1,961
		$	865,566	2,338	867,904	215,631
13	Timber, square, other, n.o.p	$	275,913	83,263	503,081	246,297
14	Other lumber, n.o.p	$	303,890	47,481	360,487	114,035
	Other saw-mill and planing mill products—					
15	Knees and futtocks	$	–	42,634	42,760	–
16	Laths	M	–	820,971	827,341	7
		$	–	3,633,363	3,668,511	65
17	Pickets	$	14,779	312,303	343,492	11,315
18	Shingles	M	419	2,086,773	2,106,373	32
		$	2,722	10,775,018	10,848,602	199
19	Shooks	$	233,292	180,279	517,417	203,072
	Other unmanufactured wood—					
20	Firewood	cord	–	15,348	15,850	–
		$	–	61,743	65,454	–
21	Pulpwood	cord	–	838,732	838,732	–
		$	–	8,454,803	8,454,803	–
22	Spoolwood	$	796,655	57,189	853,844	764,203
23	Other articles of forest produce	$	–	18,550	18,550	–
	Total wood and wood products, unmanufactured	$	**30,904,466**	**70,856,452**	**105,980,432**	**23,878,037**
	Wood and wood products, manufactured—					
24	Cooperage, barrels, empty	$	300	4,631	22,851	200
25	Pails, tubs, churns and other hollow woodenware	$	8,960	2,965	43,884	9,920
26	Staves and headings	$	80,095	58,761	156,311	29,945
	Wood pulp—					
27	Sulphate (kraft)	cwt.	1,086	2,437,996	2,518,022	–
		$	4,890	7,997,016	8,327,045	–
28	Sulphite, bleached	cwt.	151,949	876,959	1,220,764	27,906
		$	610,189	4,683,160	6,291,452	264,581
29	Sulphite, unbleached	cwt.	693,136	3,515,781	4,863,156	835,891
		$	2,597,040	12,870,706	18,381,566	4,160,567
30	Mechanically ground pulp	cwt.	1,938,225	4,045,385	6,787,640	1,397,783
		$	1,802,281	5,765,871	8,383,419	3,472,454
	Other manufactures of wood—					
31	Doors, sashes and blinds	$	26,337	5,102	81,654	79,550
32	Furniture	$	263,157	24,666	563,379	271,729
33	Handles, all kinds	$	61,271	44,774	133,585	22,095
34	Matches	$	191	8	74,965	1,856
35	Mouldings, trimmings, etc	$	131,734	2,855	145,178	42,741
36	All other manufactures of wood	$	599,239	648,490	1,471,486	494,678
	Total wood manufactured	$	**6,185,681**	**32,109,005**	**44,076,775**	**8,850,316**
	Total Wood, Wood Products and Paper	$	**42,026,282**	**153,686,140**	**213,913,944**	**36,761,384**

titles and values by classes of home produce in the four fiscal years 1920-1923—con.

1921.		1922.			1923[1].			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
158,915	158,915	–	38,020	38,020	–	66,934	66,934	1
19,326	19,561	–	56,440	77,932	14	57,377	86,947	2
476,643	484,097	–	1,004,228	1,469,695	717	1,205,405	1,931,452	
219,791	320,775	40,200	111,899	152,099	47,954	145,161	196,663	3
187,924	192,545	–	411,534	415,354	–	179,198	180,261	4
346,785	652,514	5,936	706,080	729,413	2,245	1,307,871	1,357,294	5
140	23,426	25	36	5,272	–	42	5,611	6
1,964,795	2,022,764	–	1,068,281	1,102,430	–	1,237,315	1,459,930	7
251,950	275,434	–	116,884	122,699	–	107,535	130,019	
487,424	490,359	–	743,999	751,679	–	1,282,996	1,300,582	8
1,401,269	2,545,251	–	511,040	1,214,411	3,229	485,970	924,907	9
1,396,580	3,273,714	–	510,157	1,071,892	9,091	376,902	699,378	
1,061,977	1,604,463	113,223	933,862	1,158,630	315,699	1,748,478	2,189,133	10
45,107,422	71,079,295	5,346,363	30,637,830	39,012,295	10,398,367	49,717,219	64,010,422	
3,723	34,892	1,851	3,171	46,934	2,019	7,641	51,811	11
105,824	1,293,524	42,038	55,125	1,147,410	64,840	154,641	1,173,988	
77	2,042	1,339	–	1,797	2,026	53	2,079	12
3,585	219,653	177,814	–	203,247	191,599	1,351	192,950	
53,757	319,559	75,103	45,490	300,518	154,743	48,632	292,501	13
136,241	291,683	159,984	355,667	585,027	173,614	281,960	522,547	14
8,180	8,706	–	4,986	4,986	–	5,882	6,051	15
414,067	428,644	12	961,170	971,070	844	1,379,711	1,401,297	16
3,636,924	3,767,830	90	6,038,779	6,092,657	5,905	8,167,961	8,313,267	
539,512	576,483	2,760	243,799	263,114	19,375	484,813	524,910	17
1,796,865	1,831,659	241	2,217,474	2,231,904	64	2,599,691	2,622,035	18
9,058,127	9,230,581	1,054	7,592,181	7,632,418	318	10,463,921	10,528,319	
90,262	1,068,390	52,857	53,974	602,740	40,941	14,207	543,309	19
29,025	29,368	–	12,097	12,257	–	11,723	11,912	20
116,471	118,973	–	82,742	83,712	–	69,183	70,333	
1,615,467	1,615,467	–	825,967	825,967	–	1,096,462	1,096,462	21
21,513,594	21,513,594	–	9,879,150	9,879,150	–	10,755,655	10,755,655	
99,328	863,531	804,401	32,900	840,529	387,629	41,105	428,734	22
37,010	37,010	2,003	54,135	95,159	20,030	101,880	266,990	23
84,032,389	**115,260,581**	**6,710,628**	**58,719,845**	**71,505,085**	**11,517,368**	**84,981,454**	**103,498,179**	
45,661	52,934	3,896	28,296	48,549	–	6,643	29,138	24
15,531	49,701	3,377	17,297	22,824	5,137	–	6,171	25
105,699	198,356	470	19,742	26,687	450	12,426	35,419	26
2,328,839	2,354,002	–	2,373,760	2,377,556	–	2,961,275	2,961,275	27
12,046,063	12,160,735	–	7,880,357	7,906,872	–	9,262,393	9,262,393	
1,606,834	1,941,922	1,697	1,703,400	1,859,501	1,051	2,968,032	3,182,625	28
12,820,526	15,195,065	13,740	7,440,411	8,325,617	4,477	12,311,574	13,073,289	
3,531,184	4,785,040	346,179	2,140,573	2,861,470	854,517	2,996,755	4,459,028	29
21,583,349	27,704,419	1,291,656	6,561,128	9,236,296	1,888,864	7,684,263	11,098,374	
3,768,653	5,282,043	1,787,778	3,297,127	5,336,710	1,857,508	3,927,527	6,385,895	30
11,552,473	16,491,818	5,218,426	4,713,491	10,456,092	2,771,164	5,977,306	9,552,892	
8,103	212,087	39,224	2,140	119,346	15,468	512	130,195	31
57,939	804,964	9,122	89,657	230,124	25,101	75,353	228,140	32
86,076	137,988	22,347	205,233	239,555	15,029	132,119	160,529	33
9	121,157	–	–	88,989	102,517	153	157,423	34
16,174	75,328	1,290	1,388	7,094	1,003	4,515	7,639	35
914,118	2,051,819	831,521	554,824	1,556,838	547,461	484,264	1,291,984	36
59,251,721	**75,256,371**	**7,435,069**	**27,513,964**	**38,264,883**	**5,376,671**	**35,951,521**	**45,033,586**	
216,011,556	**284,561,478**	**15,664,295**	**148,065,672**	**179,925,887**	**19,834,368**	**191,363,061**	**228,756,205**	

[1] Unrevised figures.

12.—Exports of Canada to United Kingdom, United States and All Countries in quan-

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	United Kingdom.
	V. Iron and Its Products.—					
1	Chromite (chromic iron)	ton	–	6,845	6,845	–
		$	–	127,396	127,396	–
2	Iron ore	ton	–	7,485	7,485	–
		$	–	32,421	32,421	–
	Farm Implements and Machinery—					
3	Cream separators and parts of	$	80	125,875	259,519	2,635
4	Harvesters and binders	No.	700	2,071	14,674	1,486
		$	132,301	437,222	2,898,000	300,889
5	Hay rakes	No.	111	17	1,813	240
		$	3,876	636	62,630	8,358
6	Mowing machines	No.	442	16	13,176	1,102
		$	29,869	1,110	854,831	78,367
7	Reapers	No.	10	–	1,691	25
		$	1,090	–	169,353	2,996
8	Cultivators	No.	202	900	7,326	102
		$	10,419	78,714	442,214	6,476
9	Drills	No.	495	125	2,880	80
		$	57,856	19,675	328,941	10,117
10	Harrows	No.	2,197	1,243	9,124	1,059
		$	62,060	48,648	325,211	19,208
11	Ploughs and parts of	$	657,421	670,695	2,493,714	441,786
12	Seeders	$	5,430	–	38,972	–
13	Garden and farm tools	$	91,536	8,892	325,281	82,735
14	Spades and shovels	$	38	66,309	268,118	562
15	Threshing machines, separators and parts of	$	3,135	1,597,498	1,975,549	4,038
16	Other farm implements and machines	$	43,785	35,142	244,038	91,903
17	Parts of farm implements and machines, n.o.p.	$	94,745	191,572	928,029	133,006
	Total farm implements and machinery	$	**1,193,641**	**3,281,988**	**11,614,400**	**1,183,076**
	Engines and boilers—					
18	Internal combustion engines and parts of	No.	341	42	3,168	109
		$	811,877	9,263	1,201,847	120,434
19	Locomotives and parts of	$	–	97,175	6,606,233	–
20	Steam engines and parts of	$	–	–	–	–
	Hardware and cutlery—					
21	Bolts and nuts	cwt.	7,786	937	11,839	15,858
		$	64,446	12,033	110,554	174,555
22	Cutlery	$	2,011,989	651	2,720,920	1,435,093
23	Hardware, n.o.p.	$	578,620	53,087	885,410	133,944
24	Nails, brads, spikes and tacks, all kinds	cwt.	67,420	14,247	145,349	17,587
		$	388,145	95,168	883,781	137,479
25	Nails, wire	cwt.	173,682	204,041	550,014	303,762
		$	919,226	1,098,339	2,945,137	1,907,864
26	Needles and pins, all kinds	$	12,386	65,841	124,422	1,774
27	Screws, all kinds	$	36,228	565	60,602	76,452
	Total hardware and cutlery	$	**4,011,040**	**1,325,684**	**7,730,826**	**3,867,161**
	Machinery (except agricultural)—					
28	Adding and calculating machines	$	–	–	–	71,907
29	Lawn mowers	No.	7,437	–	8,005	20,838
		$	42,189	–	46,451	110,599
30	Linotype machines and parts of	$	–	25,794	27,476	5,000
31	Sewing machines and parts of	$	71,796	93,403	725,853	117,358
32	Typewriters	No.	2,318	52	3,245	2,406
		$	184,046	7,158	260,627	203,080
33	Washing machines, domestic, and wringers	$	36,306	12,003	56,569	182,278
34	Other machinery and parts of, n.o.p.	$	497,174	3,974,727	5,299,615	734,474
	Total machinery (except agricultural)		**831,511**	**4,113,085**	**6,416,591**	**1,424,696**

tities and values by classes of home produce in the four fiscal years 1920-1923—con.

1921.		1922.			1923.[1]			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
8,246	8,246	–	1,750	1,750	–	1,302	1,302	1
151,769	151,769	–	21,201	21,201	–	16,431	16,431	
17,972	17,972	20	4,765	4,785	–	2,207	2,207	2
93,197	93,197	100	16,058	16,158	–	12,510	12,510	
78,675	157,208	618	41,175	192,432	2,802	90,008	176,190	3
1,835	13,413	342	6	2,161	326	3	5,925	4
389,928	2,826,657	70,708	2,549	449,013	54,064	608	1,091,206	
283	3,815	192	1	1,229	91	3	913	5
22,712	168,453	7,771	25	49,239	3,047	147	37,826	
2,580	13,766	443	39	4,943	400	2	8,091	6
209,472	1,005,453	35,832	2,277	369,762	24,611	93	525,889	
–	1,761	–	–	115	–	–	933	7
–	204,381	–	–	12,901	–	–	99,434	
892	7,160	18	316	3,005	15	980	1,800	8
94,273	488,133	965	28,324	180,158	1,185	88,760	125,685	
30	2,974	–	25	3,168	202	41	3,653	9
4,237	421,847	–	3,443	499,700	18,343	5,001	603,316	
726	11,809	448	245	3,742	1	1,848	2,540	10
43,878	355,339	10,757	19,015	134,063	40	72,934	95,966	
1,199,839	3,628,386	73,956	253,720	1,465,919	9,873	609,476	1,086,411	11
1,267	27,291	–	313	5,141	226	309	6,327	12
706	289,679	44,653	550	95,504	53,339	32	168,489	13
116,909	255,001	33	35,253	195,555	10	27,183	177,301	14
804,648	818,052	–	131,741	688,609	–	279,548	694,128	15
76,441	514,313	34,145	19,386	221,843	9,308	18,374	261,217	16
396,164	1,367,180	92,204	45,234	785,469	114,133	154,367	917,508	17
3,439,149	**12,527,373**	**371,642**	**583,005**	**5,345,398**	**290,981**	**1,346,840**	**6,066,893**	
81	718	38	326	649	22	187	283	18
48,490	262,775	118,169	40,789	220,555	3,017	39,400	56,823	
27,960	3,472,594	–	3,487	1,207,411	–	1,584,875	1,699,590	19
–	–	–	3,811	52,190	–	21,014	22,000	20
4,012	32,197	2,974	847	9,127	3,755	483	8,936	21
29,302	344,877	17,638	5,751	69,414	27,192	4,376	64,971	
9,342	1,535,106	560,956	1,465	804,709	106,285	1,141	208,470	22
145,733	697,983	4,350	32,600	89,554	38,011	61,550	148,197	23
10,182	87,633	400	2,258	14,152	325	1,699	24,708	24
75,745	677,172	5,128	19,567	105,708	4,215	11,105	151,184	
144,574	604,713	2,122	5,039	23,267	27,876	8,237	137,507	25
938,777	3,871,470	14,680	36,655	123,696	108,815	36,401	535,310	
55,047	85,335	286	39,049	46,594	12,886	8,319	26,005	26
664	120,098	30	163	13,449	–	104	4,921	27
1,254,610	**7,332,041**	**603,068**	**135,250**	**1,253,124**	**297,404**	**122,996**	**1,139,058**	
5,208	396,507	45,038	3,877	126,199	35,104	4,625	119,151	28
1	21,952	3,423	1	4,012	2,127	31	3,777	29
5	120,229	20,222	6	26,819	16,131	238	31,206	
3,998	20,210	–	17,051	19,126	–	4,516	4,516	30
99,670	896,988	76,176	112,485	715,569	192,166	71,333	876,571	31
49	3,978	1,480	38	2,631	1,625	25	1,698	32
5,571	332,720	119,684	3,010	201,920	134,119	1,742	138,934	
3,843	195,079	17,560	1,536	22,635	41,929	318	42,876	33
1,935,735	3,807,755	406,812	557,233	1,468,700	311,789	540,274	1,246,953	34
2,054,030	**5,769,488**	**685,492**	**695,198**	**2,581,018**	**731,238**	**623,046**	**2,460,207**	

[1] Unrevised figures.

12.—Exports of Canada to United Kingdom, United States and All Countries in quan-

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	United Kingdom.
	V. Iron and its Products—concluded.					
	Rolling mill products, n.o.p.—					
1	Bars and rods	ton	24,483	10,911	52,503	39,885
		$	1,375,212	582,213	3,012,635	2,597,318
2	Rails	ton	–	12,245	34,945	–
		$	–	484,869	1,482,643	–
3	Plates and sheets	$	–	–	–	–
4	Structural steel	ton	–	5,000	6,716	–
		$	–	377,492	575,943	–
	Total rolling mill products, n.o.p.	$	**1,375,212**	**1,444,574**	**5,071,221**	**2,597,318**
5	Tubing and pipe	$	439,882	241,799	2,325,369	345,553
	Pigs, ingots, blooms and billets—					
6	Billets, ingots and blooms	ton	26,415	21,408	49,606	49,137
		$	1,213,061	1,409,614	2,717,220	2,809,015
7	Ferro-silicon, etc	ton	2,255	18,438	25,776	1,344
		$	147,317	863,240	1,223,635	82,364
8	Pig iron	ton	–	88,625	93,541	18,902
		$	–	2,495,853	2,654,833	779,413
	Total pigs, ingots, etc	$	**1,360,378**	**4,768,707**	**6,595,688**	**3,670,792**
	Vehicles—					
9	Automobiles, freight	No.	425	13	4,133	619
		$	426,849	32,510	2,211,342	643,344
10	Automobiles, passenger	No.	807	83	20,373	1,358
		$	967,465	62,463	12,672,265	1,422,548
11	Automobiles, parts of	$	1,933,265	352,471	3,097,466	86,137
12	Bicycles and parts of	$	20,176	4,688	139,084	26,300
13	Cars and coaches, railway, and parts of	$	–	18,218	1,702,052	–
14	Other vehicles, n.o.p.	$	2,795	113,673	173,505	36,671
	Total vehicles	$	**3,350,550**	**584,023**	**19,995,714**	**2,215,000**
	Wire—					
15	Wire, barbed	cwt.	5,603	189	13,946	–
		$	30,958	639	77,649	–
16	Wire, woven fencing	$	50,410	9,712	95,241	105,793
17	Other wire, n.o.p.	$	857,604	277,873	1,625,334	629,062
	Total wire	$	**938,972**	**288,224**	**1,798,224**	**734,855**
	Other iron and its products—					
18	Castings, n.o.p.	$	4,648	382,877	401,455	19,813
19	Forgings	$	2,372	1,867,176	1,871,799	17,306
20	Furniture	$	16,141	1,086	50,475	41,078
21	Guns, rifles, and firearms, all kinds	$	2,283	1,865,590	1,868,477	26,674
22	Lamp and lanterns	$	83,237	7,637	103,401	26,014
23	Scales and weighing beams	$	22,271	32,534	106,801	14,413
24	Scrap iron and steel	$	778,132	3,489,794	4,300,663	150,677
25	Stoves, all kinds	$	24,163	42,886	152,187	12,186
26	Tinware and enameled ware	$	12,714	2,453	42,961	4,556
27	Tools, hand or machine, n.o.p.	$	136,522	81,228	661,651	143,139
28	Other manufactures of iron and steel, n.o.p.	$	478,611	1,629,521	2,710,029	1,039,085
	Total Iron and its Products	$	**15,874,157**	**25,717,121**	**81,785,829**	**17,653,826**
	VI. Non-ferrous Metals and their Products.					
29	Aluminium in bars, blocks, etc	cwt.	54,669	120,073	192,069	36,288
		$	1,609,310	3,562,112	5,680,871	1,154,260
30	Aluminium, manufactures of	$	1,372	53,778	64,364	2,037
	Brass and its products—					
31	Brass, old and scrap	cwt.	–	91,451	91,512	107
		$	–	1,216,263	1,217,940	1,176
32	Brass in bars, rods, sheets, tubing, etc	cwt.	75	3,982	5,013	30
		$	2,680	101,467	133,829	1,200
33	Brass valves	$	86,349	88,585	292,388	146,490
34	Brass, mfrs. of, n.o.p.	$	–	–	–	–
	Total brass and its products	$	**89,029**	**1,406,315**	**1,644,157**	**148,866**

tities and values by classes of home produce in the four fiscal years 1920-1923—con.

1921.		1922.			1923.[1]			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
4,178	69,340	94	324	5,432	2	557	10,134	1
293,715	4,872,203	20,095	19,231	277,096	127	24,934	404,539	
40,267	55,852	–	16,742	16,833	–	10,751	14,461	2
1,595,714	2,447,854	–	685,442	689,103	–	290,325	417,613	
–	–	–	4,555	5,231	–	2,829	3,598	3
1,600	3,585	–	229	1,235	–	220	466	4
172,015	424,165	–	17,892	152,770	–	12,705	43,071	
2,061,444	**7,744,222**	**20,095**	**727,120**	**1,124,200**	**127**	**330,793**	**868,821**	
137,224	3,106,170	354,639	16,939	1,232,039	104,000	28,101	1,266,306	5
1,787	50,925	–	16	16	93	–	148	6
103,425	2,912,471	–	912	912	2,032	–	3,754	
16,748	21,045	421	10,187	11,083	133	23,380	23,646	7
833,748	1,059,576	27,097	506,407	568,583	9,321	943,006	962,528	
51,221	70,160	224	2,287	2,511	–	40,813	40,813	8
1,852,581	2,634,153	4,205	49,219	53,424	–	833,221	833,221	
2,789,754	**6,606,200**	**31,302**	**556,538**	**622,919**	**11,353**	**1,776,227**	**1,799,503**	
4	4,290	97	8	1,296	67	5	3,720	9
3,750	2,602,853	45,496	8,450	611,185	50,612	1,689	1,444,549	
796	15,620	2,804	100	13,428	12,845	143	45,108	10
1,037,386	11,376,268	1,810,384	57,902	7,421,619	9,110,752	73,402	25,606,350	
1,870,093	4,262,325	363,160	116,129	1,151,453	425,597	134,957	2,355,066	11
2,559	229,428	492	900	9,704	125	1,998	24,126	12
18,487	953,339	–	300,625	2,777,735	–	217,167	234,267	13
277,112	395,902	3,299	126,493	142,151	25	43,394	60,983	14
3,209,387	**19,820,115**	**2,222,831**	**610,499**	**12,113,847**	**9,587,111**	**472,607**	**29,725,341**	
2	19,513	–	–	11,458	560	2	123,890	15
12	134,187	–	–	42,832	1,631	6	456,837	
8,742	144,167	28,527	222	41,852	82,683	370	105,720	16
487,576	1,992,797	77,389	3,627	242,887	164,084	24,156	1,438,814	17
496,330	**2,271,151**	**105,916**	**3,849**	**327,571**	**248,398**	**24,532**	**2,001,371**	
806,976	845,736	2,718	171,055	197,647	145	256,176	266,901	18
846,239	863,545	1,924	50, 32	52,856	1,211	399,070	402,366	19
2,567	114,247	32,346	3,029	57,488	17,089	273	28,818	20
3,869	31,207	1,101	1,569	11,405	772	204	1,022	21
7,252	67,907	44,472	1,507	58,031	100,368	482	113,410	22
21,915	113,116	5,791	14,306	84,442	400	10,629	52,181	23
1,251,787	1,442,747	7,090	658,868	706,510	-	2,065,797	2,142,627	24
34,793	141,161	8,197	24,212	62,108	11,860	23,766	74,212	25
55,944	73,445	1,582	7,164	59,383	496	2,744	49,925	26
75,863	538,967	93,584	112,811	336,004	60,754	66,603	268,936	27
759,864	3,111,568	43,018	211,324	521,857	89,903	184,149	602,660	28
19,630,413	**76,590,741**	**4,758,888**	**4,693,020**	**28,312,272**	**11,556,627**	**9,499,285**	**51,137,912**	
98,678	140,051	323	30,365	60,306	7,475	121,391	145,155	29
3,138,471	4,417,999	6,767	577,153	1,188,808	136,929	2,077,072	2,506,182	
29,119	228,820	290	14,293	322,799	1,025	27,398	361,669	30
21,335	21,442	–	33,853	33,930	–	73,733	73,736	31
270,433	271,609	–	199,752	200,214	–	551,614	551,643	
30	82	63	30	93	–	3	3	32
1,681	3,428	1,972	398	2,370	–	55	55	
2,675	324,001	89,314	1,601	133,871	111,983	502	167,897	33
–	–	5,198	7,652	19,329	15,647	15,293	42,072	34
274,789	**599,038**	**96,484**	**209,403**	**355,784**	**127,630**	**567,464**	**761,667**	

[1] Unrevised figures.

12.—Exports of Canada to United Kingdom, United States and All Countries in quan-

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	1919. United Kingdom.
	VI. Non-ferrous Metals and their Products—concluded.					
	Copper and its products—					
1	Copper, fine, contained in ore, matte, regulus, etc.	cwt.	25,634	394,399	420,033	87,042
		$	192,244	5,060,974	5,253,218	653,780
2	Copper, blister	cwt.	–	333,348	333,488	–
		$	–	6,617,821	6,617,821	–
3	Copper, pig, old and scrap	cwt.	20,705	11,336	32,554	–
		$	386,786	165,571	561,087	–
4	Copper in bars, sheets, plates, wire, etc.	$	287,607	109,386	1,447,206	635,512
	Total copper and its products	$	**866,637**	**11,953,752**	**13,879,332**	**1,289,292**
	Lead and its products—					
5	Lead, metallic, contained in ore, etc.	cwt.	–	107,894	107,894	–
		$	–	506,789	506,789	–
6	Lead in pigs, etc.	cwt.	71,416	16,679	102,013	–
		$	537,551	72,240	686,355	–
	Total lead and its products	cwt.	**71,416**	**124,573**	**209,907**	–
		$	**537,551**	**579,029**	**1,193,144**	–
	Nickel, cobalt and their products—					
7	Cobalt, metallic	lb.	176,495	82,728	260,343	22,459
		$	193,252	193,844	389,896	62,889
8	Cobalt, alloys	lb.	4,858	267	5,441	9,929
		$	17,240	1,156	19,663	49,160
9	Nickel, fine, contained in ore, matte or speiss	cwt.	60,203	256,646	316,849	111,188
		$	1,226,883	3,918,315	5,145,198	1,899,696
10	Nickel, fine	cwt.	2,240	117,172	124,558	1,209
		$	78,400	3,615,122	3,894,023	42,784
	Total nickel, cobalt and their products	$	**1,515,775**	**7,728,437**	**9,448,780**	**2,054,529**
	Precious metals and their products—					
11	Gold bearing quartz, nuggets, etc.	$	–	5,376,289	5,974,334	195
12	Silver contained in ore, concentrates, etc.	oz.	125,220	2,437,266	2,562,584	–
		$	152,154	2,629,453	2,781,705	–
13	Silver bullion	oz.	3,232,951	2,487,873	9,817,058	5,386,464
		$	3,653,042	2,779,067	11,473,896	4,401,852
14	Other articles	$	36,350	272,720	309,070	1,000
	Total precious metals and their products	$	**3,841,546**	**11,057,529**	**20,539,005**	**4,403,047**
15	Zinc and its products	$	403,483	238,841	950,082	292,146
16	Electric apparatus	$	110,881	222,115	424,476	341,003
17	Miscellaneous non-ferrous metal products	$	284,985	744,035	1,152,202	188,336
	Total Non-ferrous Metals and their Products	$	**9,260,569**	**37,545,943**	**54,976,413**	**9,873,516**
	VII. Non-metallic Minerals and their Products					
18	Clay and clay products	$	11,150	196,195	220,744	4,678
	Coal and its products—					
19	Coal	ton	180,685	1,071,772	2,120,138	81,477
		$	1,651,188	5,700,441	13,183,666	941,299
20	Coke	ton	–	17,773	17,872	–
		$	–	161,386	162,481	–
21	Tar and pitch	gal.	–	985,958	2,644,417	–
		$	–	46,402	94,202	–
22	Cinders	$	–	375	375	–
	Total coal and its products	$	**1,651,188**	**5,908,604**	**13,440,724**	**941,299**
23	Graphite and its products	$	212	113,867	114,105	1,892
24	Mica and its products	$	53,411	566,463	774,369	45,050
	Petroleum and its products—					
25	Oil, coal and kerosene, refined	gal.	503,287	1,175,189	2,757,581	–
		$	40,677	170,764	351,890	–
26	Oil, coal and kerosene, crude	gal.	510,158	607,895	1,289,259	292,936
		$	32,712	40,666	84,373	32,135
27	Oil, mineral, n.o.p.	gal.	–	109,965	165,033	140
		$	–	25,744	53,593	95

tities and values by classes of home produce in the four fiscal years 1920-1923—con.

1921.		1922.			1923.[1]			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
274,637	361,679	50,870	52,469	103,339	146,790	67,723	214,513	1
3,683,192	4,336,972	382,451	646,966	1,029,417	1,203,191	832,320	2,035,511	
346,903	346,903	–	292,727	292,727	–	378,492	378,492	2
7,589,849	7,589,849	–	4,241,468	4,241,468	–	4,946,976	4,946,976	
5,289	5,289	–	23,876	50,857	–	30,738	30,758	3
76,814	76,814	–	221,662	579,531	–	343,742	343,892	
74,542	1,310,454	35,040	111,222	478,689	15,665	70,201	374,649	4
11,424,397	**13,314,089**	**417,491**	**5,221,318**	**6,329,105**	**1,218,856**	**6,193,239**	**7,701,028**	
74,603	74,603	–	44,867	44,867	–	104,258	104,258	5
358,978	358,978	–	175,781	175,781	–	531,960	531,960	
1	36,505	78,912	37	364,312	17,961	9	380,324	6
17	166,678	369,083	157	1,543,186	81,063	68	1,834,507	
74,604	**111,108**	**78,912**	**44,904**	**499,179**	**17,961**	**104,267**	**484,582**	
358,995	**525,656**	**369,083**	**175,938**	**1,718,967**	**81,063**	**532,028**	**2,366,467**	
118,853	142,432	–	32,818	59,410	1,401	172,502	173,903	7
276,372	342,061	–	98,222	141,134	3,203	441,601	444,804	
1,120	11,049	5,754	–	7,078	2,025	–	2,769	8
5,374	54,534	31,511	–	38,369	10,382	–	14,392	
293,785	408,337	55,366	6,505	62,943	163,683	50,321	221,389	9
5,259,977	7,233,925	930,677	120,900	1,076,192	2,497,413	630,938	3,289,693	
43,437	61,846	5	22,407	46,104	7,071	166,281	204,896	10
1,522,994	2,171,366	153	780,345	1,613,510	169,326	4,538,467	5,590,948	
7,064,717	**9,801,886**	**962,341**	**999,467**	**2,869,295**	**2,689,324**	**5,611,006**	**9,339,837**	
3,036,084	3,038,779	326	2,531,724	2,532,050	–	5,449,469	5,449,469	11
2,441,270	2,441,270	–	3,211,653	3,211,653	–	6,009,828	6,012,624	12
1,870,244	1,870,244	–	2,031,383	2,031,383	–	3,965,195	3,967,030	
2,254,931	10,889,780	5,610,024	3,558,371	10,839,767	4,015,212	4,230,399	11,098,792	13
1,726,602	9,257,188	3,634,297	2,241,301	6,679,921	2,729,068	2,805,669	7,491,962	
381,355	382,355	200	283,039	284,209	1,000	202,528	203,528	14
7,014,285	**14,548,566**	**3,634,823**	**7,087,447**	**11,526,593**	**2,739,068**	**12,423,787**	**17,111,989**	
86,129	963,962	189,499	2,477	2,448,741	461,264	–	2,136,885	15
139,237	651,461	152,731	97,897	485,321	464,958	75,225	1,199,427	16
499,660	887,900	168,097	301,867	640,673	204,915	383,480	872,886	17
30,029,799	**45,939,377**	**5,997,576**	**14,687,260**	**27,885,996**	**8,107,032**	**27,889,699**	**44,358,037**	
240,128	323,989	1,894	91,746	257,624	4,973	130,579	364,785	18
1,031,870	2,277,202	350,014	1,188,326	1,953,053	39,259	1,672,411	2,089,438	19
6,287,861	16,501,478	2,720,872	7,095,769	13,182,440	320,559	9,929,931	12,956,615	
37,790	38,031	–	26,647	26,671	–	15,329	15,341	20
399,620	402,435	–	300,003	300,457	–	156,209	156,295	
738,035	8,622,210	34	965,921	2,307,528	–	477,239	2,396,099	21
50,400	571,773	10	61,137	248,155	–	47,005	280,448	
105	105	–	316	316	–	1,916	1,916	22
6,737,986	**17,475,791**	**2,720,882**	**7,457,225**	**13,731,368**	**359,559**	**10,135,061**	**13,395,274**	
118,501	120,473	85	41,057	41,149	83	19,012	19,167	23
611,023	660,218	21,826	205,444	230,429	19,426	566,118	589,424	24
215,214	553,566	–	2,407	1,482,560	–	4,000	1,558,550	25
27,219	79,625	–	656	209,930	–	1,190	147,116	
1,154,627	2,424,142	1,493,682	2,462,005	7,435,539	348,095	2,854,960	5,737,542	26
144,164	295,784	98,503	139,201	424,533	17,740	132,318	253,439	
91,476	190,036	77	421,995	473,963	150	834,837	909,709	27
19,929	87,326	73	70,090	93,225	281	130,188	166,823	

[1] Unrevised figures.

12.—Exports of Canada to United Kingdom, United States and All Countries in quan-

No.	Principal articles by classes.		1920. United Kingdom.	United States.	All Countries.	United Kingdom.
	VII. Non-metallic Minerals and their Products—concluded.					
	Petroleum and its products—con.					
1	Oil, gasoline and naphtha	gal.	86	629,193	1,311,996	–
		$	30	154,796	356,376	–
2	Wax, mineral	cwt.	29	45,276	49,840	8,963
		$	253	351,283	384,005	83,917
	Total petroleum and its products	$	**73,672**	**742,983**	**1,230,237**	**116,147**
	Stone and stone products—					
3	Abrasives	$	8,288	1,458,076	1,474,177	16,424
4	Building and paving stone	$	–	38,446	46,206	5,265
5	Cement	cwt.	–	–	–	300
		$	–	23,686	660,884	197
6	Gypsum or plaster, crude	ton	–	164,714	164,714	–
		$	–	229,521	229,521	–
7	Lime	cwt.	20	194,414	201,923	–
		$	25	147,661	155,212	–
8	Plaster of Paris, ground, etc	$	132	131,556	141,870	–
9	Sand and gravel	ton	–	1,075,283	1,075,323	–
		$	–	133,675	133,920	–
10	Other stone products	$	681	19,971	20,652	–
	Total stone and stone products	$	**9,126**	**2,182,592**	**2,862,442**	**21,886**
	Asbestos products—					
11	Asbestos	ton	7,594	84,224	105,694	12,467
		$	768,456	6,506,629	8,532,027	1,337,357
12	Asbestos sand and waste	ton	–	23,508	23,508	155
		$	–	235,829	235,829	3,025
13	Asbestos, manufactures of	$	5,201	10,119	232,316	16,669
	Total asbestos products	$	**773,657**	**6,752,577**	**9,000,172**	**1,357,051**
	Miscellaneous non-metallic minerals—					
14	Feldspar	ton	160	24,198	24,358	–
		$	544	121,785	122,329	–
15	Glass and glassware, n.o.p	$	459,082	38,018	914,447	409,314
16	Magnesite, crude, refined, etc	$	55,679	228,971	295,395	221,395
17	Pyrites and sulphur contained in pyrites	ton	–	83,640	83,640	–
		$	–	375,174	375,174	–
18	Talc, crude and refined	$	1,570	232,886	235,457	–
19	Other non-metallic minerals and products	$	31,866	28,151	757,331	8,626
	Total Non-metallic Minerals and their Products	$	**3,121,157**	**17,488,266**	**39,342,926**	**3,127,338**
	VIII. Chemicals and Allied Products.					
20	Acids	$	370,308	260,452	901,397	419,630
21	Alcohol, wood	gal.	167,380	–	168,849	113,205
		$	298,796	–	302,636	173,868
22	Other non-potable spirits, n.o.p	gal.	–	–	–	–
		$	–	–	–	–
23	Extract of hemlock bark	$	48,900	558	58,240	31,300
24	Medicinal and proprietary preparations	$	252,101	91,525	623,900	555,804
25	Explosives	$	385,281	4,070,595	4,675,047	–
	Fertilizers—					
26	Ammonia sulphate	cwt.	16,853	32,042	431,362	7,082
		$	73,383	156,322	2,065,106	40,726
27	Cyanamid	cwt.	–	1,277,319	1,277,319	–
		$	–	4,422,797	4,422,797	–
28	Other fertilizers, manufactured, n.o.p	$	–	200,637	206,134	–
	Total fertilizers	$	**73,383**	**4,779,756**	**6,694,037**	**40,726**
29	Paints, pigments and varnishes	$	748,092	126,901	1,625,418	934,409
30	Soap	$	219,165	3,886	1,000,722	24,260
	Inorganic chemicals, n.o.p.—					
31	Acetate of lime	cwt.	77,292	30,069	133,948	53,147
		$	208,418	59,636	319,182	178,529
32	Calcium carbide	cwt.	151,689	632,399	882,510	27,088
		$	627,721	2,564,627	3,599,899	110,390
33	Cobalt oxide and cobalt salts	lb.	163,236	201,449	507,693	171,599
		$	263,200	298,708	797,489	399,420
34	Soda and sodium compounds[1]	cwt.	–	–	–	–
		$	–	–	–	–

[1]Included in other chemicals, n.o.p., 1920-21

tities and values by classes of home produce in the four fiscal years 1920-1923—con.

1921.		1922.			1923.[1]			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
204,044	349,883	–	16,895	569,436	900	709,459	1,996,719	1
51,290	100,547	–	5,337	160,850	207	211,046	514,435	
9,210	22,281	–	6	48	29	34,410	43,396	2
75,717	194,642	–	123	343	299	105,986	132,166	
318,319	**766,924**	**98,576**	**215,407**	**888,881**	**18,527**	**580,728**	**1,213,979**	
1,901,681	1,946,601	1,289	477,496	487,755	3,193	2,038,007	2,057,423	3
37,939	48,712	50	22,589	46,383	–	49,993	53,377	4
1,869,609	2,811,127	–	23,391	810,448	4	578,495	1,544,254	5
1,148,476	2,107,180	–	24,481	578,474	3	322,233	719,882	
253,098	253,098	–	222,671	222,671	–	343,098	343,098	6
427,053	427,053	–	404,987	404,987	–	523,296	523,296	
475,801	477,537	–	227,607	231,493	–	322,179	329,125	7
409,253	411,683	–	217,991	222,805	–	304,636	313,666	
163,664	222,015	–	40,625	67,166	–	47,758	66,754	8
1,503,575	1,503,607	–	1,386,004	1,386,034	–	683,976	683,996	9
193,113	193,163	–	200,994	201,094	–	118,654	118,679	
54,111	54,111	–	5,357	5,357	–	78,783	78,783	10
4,335,290	**5,410,518**	**1,339**	**1,394,529**	**2,014,021**	**3,196**	**3,483,358**	**3,931,860**	
113,985	154,152	2,288	47,178	63,287	2,827	87,652	110,336	11
8,036,276	12,255,793	311,357	2,397,609	4,397,332	261,725	4,578,470	6,486,340	
36,827	37,147	21	24,376	24,446	270	60,235	61,250	12
370,721	377,596	189	235,151	235,868	3,064	607,727	621,086	
72,856	321,694	2,722	93,823	153,830	9,793	61,097	81,507	13
8,479,853	**12,955,083**	**314,268**	**2,726,583**	**4,787,039**	**274,582**	**5,247,294**	**7,188,933**	
41,272	41,312	1	22,553	22,584	5	24,674	24,679	14
248,054	249,854	30	146,756	147,866	120	164,531	164,651	
230,239	935,575	86,417	96,603	266,054	78,865	255,407	484,204	15
127,330	355,747	5,051	17,210	23,066	2,717	21,286	24,003	16
119,106	119,106	–	7,875	7,875	–	–	–	17
458,340	458,340	–	31,500	31,500	–	–	–	
201,286	202,923	–	138,672	138,949	1,970	134,414	137,759	18
164,098	206,457	3,059	42,309	58,747	3,656	79,848	132,615	19
22,270,447	**40,121,892**	**3,253,427**	**12,605,032**	**22,616,684**	**728,674**	**20,817,688**	**27,646,704**	
310,015	1,069,667	20,939	66,558	90,116	470,595	110,082	600,937	20
198,022	411,296	95,717	10	213,653	69,774	14,273	99,312	21
541,229	784,228	105,544	16	210,734	51,349	12,195	78,219	
–	–	13,439	6	19,420	21,616	3,928	26,567	22
–	–	17,684	6	24,409	15,607	6,110	22,893	
202	33,957	28,868	15,109	46,944	19,623	4,578	26,172	23
25,215	968,968	214,169	14,173	497,595	215,337	25,379	420,362	24
627,401	1,271,702	–	199,831	249,789	32	53,209	247,476	25
20,752	300,013	2,801	93,258	338,066	–	24,518	211,066	26
96,144	1,519,262	7,809	204,543	785,187	–	66,583	654,889	
882,524	883,127	–	357,695	357,695	–	1,106,462	1,109,661	27
3,015,645	3,018,057	–	903,233	903,233	–	2,895,775	2,903,659	
451,253	455,857	–	522,004	524,931	–	335,737	341,348	28
3,563,042	**4,993,176**	**7,809**	**1,629,789**	**2,213,351**	–	**3,298,095**	**3,899,896**	
154,055	1,756,045	162,903	89,908	423,604	177,651	70,360	469,742	29
2,474	143,627	138,882	3,517	227,788	227,965	1,251	300,890	30
10,755	80,922	–	13,130	22,109	12,981	4,211	22,416	31
30,087	261,578	–	15,561	28,373	40,618	8,962	66,167	
973,177	1,086,138	1	478,885	513,650	1,303	457,700	590,545	32
4,159,844	4,618,335	4	2,122,083	2,261,054	7,860	1,834,140	2,358,160	
140,115	415,764	11,212	164,717	302,386	101,946	265,034	453,203	33
306,352	891,045	23,549	339,747	538,083	172,546	527,446	874,429	
–	–	112	113,252	196,776	11,213	189,387	441,856	34
–	–	365	840,443	1,491,018	89,472	1,296,368	3,244,359	

[1] Unrevised figures.

12.—Exports of Canada to United Kingdom, United States and All Countries in quan-

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	United Kingdom.
	VIII. Chemicals and Allied Products—concluded.					
	Inorganic chemicals, n.o.p.—concluded.					
1	Other inorganic chemicals	$	11,189	420,334	501,761	16,800
	Total inorganic chemicals, n.o.p.	$	**1,110,528**	**3,343,305**	**5,218,331**	**705,139**
2	Other drugs, dyes and chemicals, n.o.p.	$	388,178	1,126,089	1,783,957	514,679
	Total Chemicals and Allied Products	$	**3,894,732**	**13,803,067**	**22,883,685**	**3,399,815**
	IX. Miscellaneous Commodities—					
3	Amusement and sporting goods	$	122,859	50,584	191,868	32,569
4	Containers—Packages, all kinds, empty	$	6,243	8,486	39,791	–
	Household and personal equipment—					
5	Brooms and whisks	$	73,244	145	96,640	22,829
6	Jewelry, all kinds, n.o.p.	$	206,046	15,715	316,862	140,393
7	Stationery	$	140,899	20,070	276,224	105,135
8	Other articles	$	50,662	159,967	286,182	22,476
	Total household and personal equipment	$	**470,851**	**195,897**	**975,908**	**290,833**
9	Mineral waters	$	1,190	32,319	37,046	–
	Musical instruments—					
10	Organs	No.	261	18	737	210
		$	19,747	22,018	71,298	24,875
11	Pianos	No.	188	160	782	583
		$	55,724	62,378	220,922	191,073
12	Other and parts of	$	98,282	27,722	210,067	118,527
	Total musical instruments	$	**173,753**	**112,118**	**502,287**	**334,475**
	Scientific and educational equipment—					
13	Cameras	$	127,886	2,352	176,166	215,558
14	Films for photographers' use and for moving pictures	$	375,101	1,049,993	1,486,079	54,871
15	Philosophical and scientific apparatus and instruments	$	167,332	47,323	364,409	105,552
	Total scientific equipment, etc.	$	**670,319**	**1,099,668**	**2,026,654**	**375,981**
	Ships and vessels—					
16	Boats, canoes and parts of	$	14,099	10,402	65,424	20,818
17	Gasoline launches	No.	5	11	25	–
		$	2,175	15,126	84,871	–
18	Ships sold to other countries	ton	49,144	589	161,948	12,723
		$	19,812,000	104,900	50,248,567	4,840,000
	Total ships and vessels	$	**19,828,274**	**130,428**	**50,398,862**	**4,860,818**
	Vehicles, n.o.p.—					
19	Aeroplanes and parts of	$	–	864,784	864,784	1,735
20	Buggies, carriages and parts, carts and wagons	$	36,830	5,000	47,195	150
	Total vehicles, chiefly of wood	$	**36,830**	**869,784**	**911,979**	**1,885**
21	Works of art (paintings)	$	23,642	59,356	83,085	17,541
	Other miscellaneous commodities, n.o.p.—					
22	Brushes, all kinds	$	43,344	3,817	125,047	37,122
23	Cartridges, gun, rifle and pistol	$	83,264	7,016,804	7,366,733	11,949
24	Contractors' outfits	$	–	34,974	34,974	3,695
25	Junk, except metallic and rubber	cwt.	–	74,566	74,566	–
		$	–	140,255	140,255	–
26	Settlers' effects	$	788,967	6,587,817	7,631,498	907,729
27	Other miscellaneous	$	579,459	240,174	1,256,921	50,336
	Total Miscellaneous Commodities	$	**22,828,995**	**16,582,481**	**71,722,908**	**6,924,933**
	Total Exports, Canadian Mdse.	$	**489,152,637**	**464,028,183**	**1,239,492,098**	**312,844,871**

tities and values by classes of home produce in the four fiscal years 1920-1923—con.

1921.		1922.			1923.[1]			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
250,759	351,537	4,877	156,657	223,168	1,991	243,182	328,510	1
4,747,042	**6,122,495**	**28,795**	**3,474,491**	**4,541,696**	**312,491**	**3,910,098**	**6,871,625**	
2,265,412	3,222,414	337,164	443,747	980,144	493,791	460,186	1,108,728	2
12,236,087	**20,366,279**	**1,062,757**	**5,937,136**	**9,596,170**	**1,984,441**	**7,951,543**	**14,046,940**	
32,323	98,631	8,069	27,891	52,912	1,711	27,043	44,227	3
16,063	27,959	9,280	74,677	107,571	691	61,555	207,100	4
161	57,327	9,096	85	24,657	3,570	78	23,293	5
20,832	282,690	23,901	8,174	80,021	6,965	4,954	21,162	6
22,613	305,662	53,710	16,170	163,745	19,224	14,222	107,481	7
212,054	326,209	3,983	132,379	166,356	12,194	77,802	117,712	8
255,660	**971,888**	**90,690**	**158,888**	**434,779**	**41,953**	**97,056**	**269,648**	
12,785	16,480	–	58,904	63,329	–	105,275	113,548	9
4	589	40	11	216	47	15	173	10
30,680	86,221	4,531	54,575	72,517	7,150	177,893	195,225	
104	1,581	47	92	273	26	89	267	11
41,373	487,978	18,814	38,502	103,118	13,850	36,264	97,641	
46,504	377,127	7,450	70,934	178,704	21,627	94,611	268,520	12
118,557	**951,326**	**30,795**	**164,611**	**354,339**	**42,627**	**308,768**	**561,386**	
771	244,223	141,497	260	153,212	686,980	25,402	742,020	13
2,378,524	2,493,694	15,632	2,245,754	2,352,235	707,964	2,182,715	2,948,739	14
34,546	199,587	33,619	28,632	115,221	8,403	16,242	39,401	15
2,413,841	**2,937,504**	**190,748**	**2,274,646**	**2,620,668**	**1,403,347**	**2,224,359**	**3,730,160**	
80,004	129,294	2,078	32,806	45,049	600	23,004	41,037	16
54	56	4	20	38	3	9	20	17
43,118	44,718	2,810	63,447	82,957	1,800	15,542	22,506	
6,531	46,595	–	–	7,396	–	596	1,165	18
1,637,000	17,175,123	–	–	3,114,200	–	56,247	109,747	
1,760,122	**17,349,135**	**4,888**	**96,253**	**3,242,206**	**2,400**	**94,793**	**173,290**	
56,562	60,247	456	37,349	38,375	–	3,797	3,797	19
4,380	24,658	435	1,661	16,914	–	1,620	27,010	20
60,942	**84,905**	**891**	**39,010**	**55,289**	–	**5,417**	**30,807**	
78,432	96,114	14,479	57,179	72,563	18,937	49,661	69,407	21
1,349	214,917	18,920	3,394	73,990	30,375	1,373	72,276	22
1,072	52,674	2,223	1,271	15,070	193	49,081	83,811	23
69,790	74,285	14,562	47,479	66,146	–	92,896	152,646	24
65,956	65,956	–	37,456	37,456	–	54,260	54,260	25
184,787	184,787	–	117,891	117,891	–	165,112	165,112	
7,574,512	8,822,207	580,931	5,346,795	6,408,583	687,356	6,635,367	7,971,002	26
150,619	506,857	69,316	159,116	344,665	91,614	181,400	408,648	27
12,730,854	**32,389,669**	**1,035,792**	**8,625,325**	**14,030,001**	**2,321,201**	**10,099,156**	**14,053,068**	
542,322,967	**1,189,163,701**	**299,361,675**	**292,588,643**	**740,240,680**	**379,067,445**	**369,080,218**	**931,451,443**	

[1] Unrevised figures.

13.—Imports of Canada from the United Kingdom, the United States and in the four fiscal

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	United Kingdom.
	I. Agricultural and Vegetable Products (except chemicals, fibres and wood).					
	A—Mainly Food.					
	Fruits, fresh—					
1	Apples	brl.	–	145,088	145,088	–
		$	–	1,053,744	1,053,744	–
2	Apricots, quinces, etc.	lb.	–	1,430,034	1,430,034	20
		$	–	114,378	114,378	12
3	Bananas	bunch	–	1,844,559	1,844,559	–
		$	–	4,947,007	4,947,007	–
4	Cherries	lb.	–	1,138,351	1,138,351	–
		$	–	212,508	212,508	–
5	Cranberries	brl.	–	33,704	33,704	–
		$	–	247,796	247,796	–
6	Grape fruit or shaddocks	$	200	622,406	665,496	–
7	Grapes	lb.	326,276	8,624,630	8,979,296	600,414
		$	70,762	865,104	942,358	129,113
8	Lemons and limes	$	6,371	1,270,862	1,378,597	2,416
9	Oranges	$	3,685	6,225,150	6,534,269	4,777
10	Peaches	lb.	–	14,219,162	14,219,162	120
		$	–	640,771	640,771	58
11	Pears	lb.	–	19,273,867	19,280,139	–
		$	–	1,065,301	1,065,702	–
12	Pineapples	$	–	334,996	338,052	–
13	Plums	bush.	–	125,934	125,934	16
		$	–	544,391	544,391	230
14	Melons	No.	–	3,157,858	3,157,858	12
		$	–	374,794	374,794	6
15	Strawberries	lb.	–	3,653,811	3,653,811	–
		$	–	724,254	724,254	–
16	Fruits, other, fresh	$	11	209,170	222,307	–
	Total fruits, fresh	$	**81,029**	**19,542,632**	**20,006,425**	**136,612**
	Fruits, dried—					
17	Apricots	lb.	–	471,790	472,155	–
		$	–	109,230	109,331	–
18	Currants	lb.	–	792,810	6,414,102	132,246
		$	–	162,740	1,053,399	23,279
19	Dates	lb.	531,244	3,282,096	3,850,936	284,370
		$	71,131	677,222	754,994	35,174
20	Figs	lb.	–	3,199,104	4,502,926	46, 56
		$	–	520,794	735,709	3,612
21	Peaches	lb.	–	3,149,592	3,149,592	–
		$	–	551,719	551,719	–
22	Prunes and plums, unpitted	lb.	–	14,482,369	14,491,800	–
		$	–	2,033,006	2,035,526	–
23	Raisins	lb.	9,262	38,864,941	37,619,365	83,838
		$	2,264	5,242,073	5,420,276	19,016
24	All other fruits	lb.	–	1,512,754	1,791,473	–
		$	–	254,105	295,827	–
	Total fruits, dried	lb.	**540,506**	**63,755,456**	**72,292,349**	**546,910**
		$	**73,395**	**9,550,889**	**10,956,781**	**81,081**
25	Fruit juices	gal.	13,260	124,823	217,016	24,658
		$	21,943	220,196	272,097	53,601
	Fruits, otherwise prepared—					
26	Citrons, lemons and orange rinds in brine.	$	81,580	50,631	134,407	53,093
27	Fruit in air-tight cans, etc.	lb.	109,281	11,434,555	12,799,483	88,976
		$	12,232	1,560,261	1,697,324	10,959
28	Jellies, jams and preserves, n.o.p.	lb.	1,151,193	280,354	1,499,985	860,011
		$	194,151	65,161	271,743	224,160
29	Olives in brine and otherwise	gal.	160	84,952	134,396	–
		$	25	85,428	124,253	–
	Total fruits, otherwise prepared	$	**287,904**	**1,761,955**	**2,228,207**	**288,212**
	Grand total fruits	$	**464,358**	**30,985,435**	**33,463,270**	**559,506**

All Countries in quantities and values, by classes entered for consumption, years 1920-1923.

1921.		1922.			1923.[1]			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
273,319	273,319	-	110,702	110,702	-	155,201	155,201	1
1,528,606	1,528,606	-	680,832	680,832	-	775,819	775,819	
630,399	630,419	-	1,078,530	1,078,530	-	2,041,653	2,041,728	2
57,038	57,050	-	76,438	76,438	-	136,112	136,130	
1,706,288	1,706,288	-	2,159,381	2,159,860	-	2,213,379	2,219,814	3
5,415,511	5,415,511	-	5,210,811	5,211,098	-	4,205,719	4,215,766	
477,265	477,265	-	503,108	503,108	-	494,697	494,697	4
108,737	108,737	-	92,591	92,591	-	83,349	83,349	
21,841	21,841	-	16,953	16,955	-	19,944	19,944	5
173,634	173,634	-	200,654	200,668	-	212,894	212,894	
741,167	791,726	-	656,302	711,993	304	796,635	849,055	6
5,979,961	6,632,035	608,080	6,917,481	7,669,621	704,456	6,836,059	7,698,005	7
717,711	858,340	109,960	695,235	831,522	75,275	565,377	661,443	
867,468	1,005,616	4,290	1,158,298	1,446,444	57,413	885,288	1,474,673	8
6,159,339	6,322,543	8,414	6,335,104	6,594,107	111,307	5,394,528	5,840,941	9
6,195,284	6,195,404	540	10,927,509	10,928,049	216	10,865,780	10,866,101	10
442,207	442,265	219	583,231	583,450	88	403,198	403,312	
12,482,288	12,484,934	-	10,367,293	10,370,281	400	15,251,313	15,256,255	11
797,381	797,645	-	584,399	584,599	49	566,421	566,729	
328,914	329,006	-	451,715	453,018	-	505,766	508,231	12
106,747	106,763	10	106,447	106,457	3	111,081	111,086	13
476,229	476,459	170	404,299	404,469	58	303,408	303,495	
3,244,734	3,245,339	-	3,267,624	3,267,818	72	3,912,782	3,913,076	14
453,648	453,711	-	384,985	385,038	20	333,792	333,827	
2,436,573	2,436,573	-	2,660,392	2,666,692	-	6,122,758	6,122,758	15
559,777	559,777	-	510,468	511,413	-	785,150	785,150	
78,336	80,854	1,977	96,720	105,993	1,918	161,704	204,237	16
18,905,703	**19,401,480**	**125,030**	**18,122,082**	**18,873,673**	**246,432**	**16,115,160**	**17,355,051**	
686,862	687,051	-	639,203	640,113	-	605,322	608,462	17
164,497	164,531	-	115,011	115,179	-	126,176	126,352	
975,707	4,934,917	219,697	983,008	7,195,245	45,599	1,641,136	5,193,976	18
152,332	849,893	29,670	126,100	1,117,955	4,331	199,748	634,465	
3,742,638	4,097,068	1,086,558	5,275,925	6,461,995	925,609	6,239,534	7,225,012	19
556,722	603,346	84,276	670,068	766,042	74,492	622,145	701,963	
1,896,701	2,670,145	158,657	2,367,336	3,637,348	166,379	2,016,140	3,612,481	20
238,743	337,432	13,461	286,042	454,461	9,653	199,976	296,771	
1,154,843	1,154,843	-	1,459,687	1,459,687	10	2,065,398	2,065,408	21
210,351	210,351	-	176,929	176,929	1	268,562	268,563	
10,489,100	10,494,520	-	13,702,978	13,705,795	48	13,806,997	13,993,275	22
1,458,027	1,459,102	-	1,277,912	1,278,539	16	1,324,294	1,335,200	
20,390,188	24,979,194	99,109	24,177,923	27,666,692	105,496	30,646,915	32,044,480	23
4,363,940	5,482,589	16,126	4,242,809	5,132,755	10,077	3,426,146	3,644,419	
1,532,710	1,734,400	-	878,277	1,192,582	3,094	1,718,339	1,916,033	24
117,878	162,997	-	66,523	109,396	298	114,954	144,346	
40,868,749	**59,752,138**	**1,564,021**	**49,484,337**	**61,959,357**	**1,246,235**	**58,739,781**	**66,659,127**	
7,262,490	**9,270,241**	**143,533**	**6,961,394**	**9,151,256**	**98,868**	**6,282,001**	**7,152,079**	
32,644	109,252	16,812	28,072	77,768	8,915	40,147	98,682	25
114,011	185,754	17,617	131,390	170,404	19,608	135,315	173,418	
10,194	72,522	14,836	4,495	24,136	12,551	7,596	33,982	26
13,390,570	19,383,538	64,118	6,261,354	8,096,222	84,217	9,535,186	12,480,511	27
1,950,243	2,795,868	8,160	765,172	970,308	5,998	993,978	1,257,597	
242,459	1,434,109	570,751	88,175	774,548	1,504,919	170,036	1,775,685	28
75,846	397,745	107,718	35,731	173,271	225,528	30,631	282,198	
49,606	138,854	-	73,243	181,858	-	66,147	192,215	29
70,839	193,166	-	67,550	145,029	-	58,298	163,910	
2,107,122	**3,459,301**	**130,714**	**872,948**	**1,312,744**	**244,077**	**1,090,293**	**1,728,687**	
28,389,326	**32,316,776**	**416,954**	**26,087,814**	**29,508,077**	**608,985**	**23,622,769**	**26,409,235**	

[1] Unrevised figures.

13.—Imports of Canada from the United Kingdom, the United States and in the four fiscal

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	United Kingdom.
	I. Agricultural and Vegetable Products (except chemicals, fibres and wood)—con.					
	A—Mainly Food—continued.					
	Nuts—					
1	Cocoanuts and preparations	$	18,713	192,881	762,679	111,212
2	Not shelled	$	7,376	1,362,655	1,793,607	47,869
3	Shelled	$	194,614	1,586,881	3,333,287	184,465
	Total nuts	$	**220,703**	**3,142,417**	**5,889,573**	**343,546**
4	Vegetables, fresh and dried	$	120,270	3,585,808	3,917,478	111,409
5	Vegetables, canned	lb.	60	14,012,753	14,800,253	6,918
		$	20	1,144,488	1,301,237	1,616
6	Sauces and pickles	gal.	79,842	148,697	341,952	98,921
		$	201,657	205,384	495,377	264,584
	Grains and farinaceous products—					
7	Beans, n.o.p.	bush.	3,594	249,753	444,698	4,075
		$	23,855	947,674	1,594,030	21,165
8	Corn (Indian) for purpose of distillation	bush.	–	202,583	202,583	–
		$	–	318,202	318,202	–
9	Corn (Indian) not for purpose of distillation	bush.	–	8,668,200	8,766,708	10
		$	–	13,897,585	14,052,977	23
10	Oats	bush.	1,679	3,127,681	3,129,360	–
		$	3,309	2,448,672	2,451,981	–
11	Peas	bush.	24	69,433	72,188	22
		$	264	317,773	328,192	266
12	Rice, uncleaned, unhulled or paddy	lb.	–	12,755,447	43,935,264	–
		$	–	1,110,848	3,273,335	–
13	Rice, cleaned	lb.	6,710	16,425,212	25,642,291	41,100
		$	378	1,636,046	2,120,956	2,510
14	Wheat	bush.	2	92,082	92,087	–
		$	6	189,130	189,142	–
15	Other grains	$	–	58,492	60,178	–
	Total grains	$	**27,812**	**20,924,422**	**24,388,993**	**23,964**
	Milled products—					
16	Cornmeal	brl.	–	26,317	26,354	–
		$	–	216,298	216,594	–
17	Rice and sago flour, rice meal, etc	lb.	–	579,091	701,787	2,220
		$	–	62,078	72,922	349
18	Sago and tapioca flour	lb.	–	495,138	725,082	38,970
		$	–	36,838	43,155	2,071
19	Wheat flour	brl.	–	15,707	15,801	1
		$	–	166,080	167,250	12
20	Other breadstuffs	$	28,517	93,268	122,077	29,300
	Total milled products	$	**28,517**	**574,592**	**621,998**	**31,732**
	Prepared foods and bakery products—					
21	Biscuits, sweetened	lb.	214,041	121,745	352,136	201,817
		$	75,053	28,353	106,318	87,727
22	Biscuits, not sweetened	lb.	66,382	582,867	725,867	199,133
		$	16,107	65,805	91,983	26,929
23	Bread, passover	$	–	156,265	156,265	–
24	Cereal foods, prepared, in packages not exceeding 25 lb.	lb.	47,906	2,016,538	2,079,552	34,491
		$	11,396	220,211	233,903	8,740
25	Cereal foods prepared, n.o.p.	$	1,974	57,846	60,788	4,973
26	Macaroni and vermicelli	lb.	–	886,432	949,960	200
		$	–	108,461	115,895	24
27	Milk food and other similar preparations	$	29,088	380,966	411,295	73,883
	Total prepared foods and bakery products	$	**133,618**	**1,017,907**	**1,176,447**	**202,276**

All Countries in quantities and values, by classes entered for consumption, years 1920-1923—con.

1921.		1922.			1923[1].			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
87,491	562,975	29,057	40,895	422,513	6,054	18,260	337,336	1
991,632	1,467,250	25,363	827,179	1,304,739	25,582	661,895	1,042,855	2
1,050,542	2,859,069	81,868	1,028,312	2,807,032	105,955	751,839	2,348,284	3
2,129,665	**4,889,294**	**136,288**	**1,896,386**	**4,534,284**	**137,591**	**1,431,994**	**3,728,475**	
4,117,026	4,444,056	142,672	3,167,938	3,539,491	112,947	3,221,929	3,579,782	4
6,356,482	8,293,193	4,375	3,747,153	6,407,327	1,276	5,596,032	7,899,537	5
632,159	1,124,041	958	371,480	889,913	298	474,659	806,286	
83,111	299,827	114,087	59,911	299,311	142,565	81,205	339,986	6
128,936	500,148	252,389	98,706	460,447	310,161	128,751	518,666	
151,518	203,725	5,002	60,726	148,157	68,804	32,140	329,974	7
497,458	637,632	20,614	197,876	376,792	150,817	97,045	777,214	
318,804	318,804	–	365,417	365,417	–	133,305	133,305	8
344,467	344,467	–	230,941	230,941	–	100,040	100,040	
9,520,482	9,658,960	26	13,755,545	13,755,571	5	10,841,657	10,867,016	9
12,084,398	12,276,943	68	8,482,336	8,482,404	8	7,673,041	7,695,280	
939,734	939,955	1,266	118,065	119,334	581	1,062,656	1,063,336	10
660,433	661,030	1,835	70,157	71,993	597	412,732	413,406	
62,450	67,339	3	26,302	33,810	825	32,811	52,245	11
234,848	248,200	14	86,286	106,334	3,046	115,660	167,893	
7,779,558	34,990,378	–	11,932,192	37,232,644	2,500	9,213,294	32,874,729	12
644,692	2,640,824	–	436,506	1,393,035	82	376,521	1,103,420	
10,879,583	15,598,940	203,740	13,899,306	21,254,638	986,995	10,435,530	22,110,838	13
800,650	1,140,264	10,049	660,141	978,164	40,412	473,093	917,176	
134,109	134,113	–	371,651	371,656	–	84,816	84,818	14
280,250	280,266	–	522,029	522,071	–	90,594	90,958	
44,160	44,309	183	24,351	24,585	1,730	8,560	10,295	15
15,591,456	**18,273,935**	**32,763**	**10,710,653**	**12,186,319**	**196,692**	**9,347,646**	**11,275,682**	
28,627	28,630	–	35,960	35,960	–	32,200	32,203	16
207,610	207,616	–	136,263	136,263	–	120,782	120,812	
328,903	416,284	10,048	93,927	175,749	46,222	66,690	207,972	17
32,917	41,680	1,127	8,535	16,010	4,562	4,880	16,834	
1,301,088	2,137,141	157,218	966,281	1,642,167	119,929	745,979	1,674,100	18
76,711	125,610	6,238	28,854	47,847	4,648	31,689	57,867	
27,554	27,583	10	39,751	39,900	4	54,012	54,060	19
269,366	269,867	127	271,407	273,159	36	337,764	338,197	
172,697	202,988	35,879	155,047	191,190	29,450	122,704	152,185	20
759,301	**847,761**	**43,371**	**600,133**	**661,469**	**38,696**	**617,819**	**685,895**	
54,141	276,792	125,369	43,937	192,629	86,770	134,410	249,262	21
14,277	107,758	47,720	11,540	66,108	33,038	28,154	69,745	
421,420	780,532	309,151	260,061	597,109	524,833	277,788	835,214	22
54,945	99,418	31,377	39,496	76,309	44,154	42,433	91,490	
103,772	103,772	–	138,302	138,302	–	110,633	110,633	23
629,025	670,047	54,667	867,464	932,694	52,451	934,697	993,062	24
70,618	80,669	11,477	89,235	102,566	12,019	85,512	99,022	
32,120	37,713	1,472	26,434	28,645	439	24,964	25,955	25
850,778	911,004	–	886,129	1,096,752	290	1,123,016	1,249,498	26
111,550	119,676	–	93,826	114,810	32	102,514	115,638	
480,908	556,673	45,152	355,062	402,356	44,342	261,408	309,356	27
868,190	**1,105,679**	**137,198**	**753,895**	**929,096**	**134,024**	**655,618**	**821,839**	

[1] Unrevised figures.

13.—Imports of Canada from the United Kingdom, the United States and in the four fiscal

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States	1920. All Countries.	United Kingdom.
	I. Agricultural and Vegetable Products (except chemicals, fibres and wood)—con.					
	A—Mainly Food—concluded.					
	Other kindred products—					
1	Arrowroot	lb.	35,349	10,976	202,032	4,830
		$	4,647	1,780	25,140	784
2	Malt, whole, crushed or ground	lb.	–	2,950,730	2,950,730	1,980
		$	–	128,715	128,715	226
3	Sago and tapioca	lb.	114,369	242,342	4,553,578	55,327
		$	7,249	21,744	301,155	5,360
4	All other breadstuffs, n.o.p.	$	8,111	254,250	285,992	4,358
	Total grains and farinaceous products	$	**209,954**	**22,923,410**	**26,928,449**	**268,700**
5	Oils, Total Vegetable	$	31,869	1,238,493	1,641,103	120,896
	Sugar and its products—					
6	Candy and confectionery	lb.	561,535	1,892,504	2,897,011	878,860
		$	184,608	475,644	740,765	325,963
7	Molasses and syrups, n.o.p.	$	70,816	662,943	4,420,228	96,696
8	Sugar, cane and beet, etc.	lb.	6,016	340,622,136	1,082,730,684	5,048,448
		$	578	22,546,404	68,457,361	972,724
	Total sugar and its products	$	**256,002**	**23,684,991**	**73,618,354**	**1,395,383**
	Tea, Coffee, Cocoa and Spices.					
	Cocoa and chocolate—					
9	Cocoa beans, not roasted, crushed or ground	cwt.	15,560	93,790	166,494	9,778
		$	343,485	2,037,771	3,553,230	150,832
10	Cocoa paste, cocoa or chocolate preparations	lb.	62,452	1,437,511	1,535,177	1,121,305
		$	30,151	411,940	458,184	412,120
11	Cocoa butter	lb.	1,555,832	7,060,954	8,630,460	427,161
		$	668,923	2,941,310	3,615,331	171,633
	Total cocoa and chocolate	$	**1,042,559**	**5,391,021**	**7,626,745**	**734,585**
	Coffee and Chicory—					
12	Coffee, green, imported direct	lb.	1,277,738	–	19,028,181	1,358,714
		$	417,173	–	4,449,756	433,612
13	Coffee, other, and chicory	lb.	11,430	1,577,774	1,731,198	71,217
		$	4,899	590,005	627,347	28,051
	Total coffee and chicory	lb.	**1,289,168**	**1,577,774**	**20,759,379**	**1,429,931**
		$	**422,072**	**593,005**	**5,077,103**	**161,663**
14	Spices	$	397,772	583,548	1,272,450	599,257
15	Tea	lb.	2,901,458	1,227,656	32,339,350	12,058,587
		$	1,122,828	309,683	8,336,163	3,886,382
16	Vinegar	gal.	71,900	61,791	141,338	36,508
		$	54,594	14,990	73,310	29,208
17	Yeast	lb.	–	3,247,391	3,247,776	–
		$	–	878,242	878,342	–
18	Hops	lb.	31,658	1,752,331	1,850,742	57,436
		$	28,720	984,369	1,065,224	48,289
19	Vegetable products, n.o.p. (mainly food)	$	3,374	149,657	153,236	11,396
	Total agricultural and vegetable products (mainly food)	$	**4,557,072**	**95,820,394**	**171,745,913**	**8,836,420**

All Countries in quantities and values, by classes entered for consumption, years 1920-1923—con.

1921.		1922.			1923[1].			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
13,582	141,789	4,588	39,614	184,993	6,923	11,496	202,366	1
1,207	13,226	757	4,000	13,552	1,350	961	15,337	
7,229,715	7,231,695	2,640	9,653,719	9,656,359	–	13,023,137	13,023,137	2
319,088	319,314	224	275,541	275,765	–	320,473	320,473	
441,998	2,704,340	21,170	226,235	3,882,799	250,473	58,846	3,428,940	3
17,658	139,015	963	10,669	128,985	12,638	3,663	129,438	
285,357	314,156	8,697	151,361	176,529	6,808	152,914	174,769	4
17,842,257	**21,013,086**	**223,973**	**12,506,252**	**14,374,715**	**390,208**	**11,099,094**	**13,423,433**	
803,145	1,273,489	31,326	433,344	763,744	27,070	350,834	710,335	5
1,283,907	2,483,597	1,497,753	1,080,747	3,131,802	1,572,051	1,399,993	3,407,270	6
396,796	802,230	409,161	197,281	725,523	376,552	204,783	650,304	
611,452	6,991,666	52,146	404,755	2,090,692	60,387	385,730	2,773,837	7
167,844,267	706,825,703	3,120	166,444,888	883,283,112	21,366	120,024,763	1,146,543,348	8
20,471,605	78,276,334	283	9,058,292	41,624,696	1,777	3,432,022	36,187,815	
21,479,853	**86,070,239**	**461,599**	**9,660,328**	**44,440,911**	**438,716**	**4,022,535**	**39,611,856**	
61,117	116,269	29,301	71,541	163,978	24,751	47,131	160,856	9
858,586	1,717,316	286,839	687,282	1,557,382	223,340	521,536	1,617,986	
705,908	1,863,549	443,134	640,118	1,149,967	51,214	1,018,895	1,159,448	10
126,510	554,031	96,064	91,992	205,301	13,735	88,444	116,481	
2,688,156	3,257,725	869,111	3,688,213	5,124,467	188,305	2,562,567	4,438,882	11
876,043	1,105,314	268,304	999,839	1,430,214	52,406	755,340	1,254,585	
1,861,139	**3,376,661**	**651,207**	**1,779,113**	**3,192,897**	**289,481**	**1,365,320**	**2,989,002**	
–	16,293,945	971,438	–	20,049,318	540,949	–	20,457,493	12
–	3,814,097	185,848	–	3,020,763	109,019	–	3,211,067	
1,120,465	1,497,430	24,985	1,612,420	1,696,237	46,904	1,091,418	1,175,677	13
390,718	470,403	11,489	452,659	471,048	19,027	349,879	372,942	
1,120,465	**17,791,375**	**996,423**	**1,612,420**	**21,745,555**	**587,853**	**1,091,418**	**21,633,170**	
390,718	**4,284,500**	**197,337**	**452,659**	**3,491,811**	**128,046**	**349,879**	**3,584,009**	
431,443	1,275,076	520,088	433,125	1,219,832	517,658	407,537	1,180,265	14
326,589	33,422,902	12,390,354	275,189	38,844,703	9,440,856	450,706	40,274,205	15
85,684	9,668,785	3,632,505	55,727	9,132,093	2,833,134	78,170	10,356,757	
68,321	113,280	34,515	55,080	98,276	52,802	63,013	133,472	16
16,082	50,030	28,255	10,048	43,189	37,556	13,458	55,032	
1,577,500	1,577,564	–	1,764,055	1,764,108	–	1,894,530	1,895,707	17
465,421	465,453	–	578,397	578,540	–	568,374	568,429	
1,498,185	1,681,822	45,951	2,055,543	2,141,702	66,145	3,121,909	3,380,265	18
843,507	1,000,711	39,940	688,153	778,958	47,542	605,406	697,814	
176,310	189,511	19,133	258,351	397,128	22,786	388,264	482,386	19
79,792,671	**171,941,847**	**6,754,612**	**58,477,911**	**117,346,030**	**5,902,179**	**48,128,973**	**108,701,762**	

[1] Unrevised figures.

13.—Imports of Canada from the United Kingdom, the United States and in the four fiscal

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	United Kingdom.
	1. Agricultural and Vegetable Products (except chemicals, fibres and wood)—con.					
	B—Other than Food.					
	Beverages, alcoholic—					
	Brewed.					
1	Ale, porter, etc.	gal.	28,198	27,866	56,064	62,669
		$	46,161	33,009	79,170	127,387
	Distilled.					
2	Brandy, etc.	gal.	4,106	3,904	149,157	9,012
		$	29,132	14,133	986,494	96,491
3	Cordials and liqueurs, all kinds	gal.	1,694	2,242	10,419	4,351
		$	10,161	13,138	53,073	62,556
4	Gin, all kinds, n.o.p.	gal.	63,734	2,470	183,113	197,667
		$	301,742	9,204	699,473	2,026,542
5	Rum	gal.	23,580	10,307	214,416	53,630
		$	63,951	25,709	315,886	288,942
6	Vermouth	gal.	606	5,761	19,877	3,989
		$	4,552	19,908	70,094	19,928
7	Whiskey	gal.	803,076	53,003	861,222	1,627,337
		$	5,311,444	110,639	5,423,636	20,353,005
8	All spirituous or alcoholic liquors, n.o.p.	gal.	2	2,467	6,397	1,031
		$	9	2,638	17,188	9,505
	Total distilled beverages	gal.	**901,798**	**89,154**	**1,441,601**	**1,897,017**
		$	**5,720,991**	**195,369**	**7,565,844**	**22,856,969**
	Fermented.					
	Wines.					
9	Wines, non-sparkling	gal.	10,893	427,872	693,583	23,723
		$	35,780	661,056	1,223,421	129,265
10	Champagne, and all other sparkling wines in bottles	doz.	188	2,190	13,395	2,898
		$	7,413	24,489	267,101	94,970
	Total wines	$	**43,193**	**685,545**	**1,490,522**	**224,235**
	Total beverages, alcoholic	$	**5,819,345**	**913,923**	**9,135,536**	**23,208,593**
	Gums and resins—					
11	Arabic, amber, etc.	lb.	35,322	366,900	467,932	270,594
		$	13,144	125,438	151,856	52,303
12	Australian, copal, damar, etc.	lb.	110,729	1,735,809	1,855,840	76,197
		$	19,545	335,352	357,699	25,223
13	Chicle or sappato gum, crude	lb.	–	891,117	2,084,392	–
		$	–	614,588	1,542,165	–
14	Lac, crude, seed, button, stick and shell	lb.	18,593	652,568	1,339,984	77,529
		$	24,770	653,827	1,194,501	70,498
15	Resin or rosin in packages	cwt.	–	238,169	238,169	336
		$	–	1,459,395	1,459,395	2,201
16	Other gums and resins	$	23,094	259,180	282,100	38,109
	Total gums and resins	$	**80,553**	**3,447,580**	**4,987,716**	**188,334**
17	Oil cake and meal	cwt.	–	97,106	98,106	1,578
		$	–	333,671	336,310	10,757
	Oils, vegetable, not food—					
18	Castor oil	gal.	111,610	31,082	143,717	95,875
		$	206,335	70,355	279,231	201,694
19	Chinawood and rosin oil	$	–	600,655	617,550	1,958
20	Cocoanut, palm and palm kernel oil	gal.	17,977	807,006	861,462	142,866
		$	34,762	1,175,290	1,255,664	221,923
21	Cotton seed oil, crude	gal.	–	5,789,859	5,789,859	–
		$	–	9,518,484	9,518,484	–
22	Essential oils, n.o.p.	lb.	32,321	311,868	388,395	45,806
		$	90,266	739,891	971,598	162,269
23	Flaxseed or linseed oil raw or boiled	lb.	4,532,607	288,651	4,836,108	5,375,276
		$	1,038,697	63,686	1,106,531	1,310,413
24	Other vegetable oils	$	11,275	552,149	583,256	24,340
	Total oils, vegetable	$	**1,381,335**	**12,720,510**	**14,332,314**	**1,922,597**

All Countries in quantities and values, by classes entered for consumption, years 1920-1923—con.

1921.		1922.			1923[1].			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
11,162	74,105	42,306	6,065	49,160	51,653	1,635	54,241	1
15,919	143,737	103,051	10,683	114,810	116,808	2,425	120,362	
1,965	355,557	1,669	21	113,386	2,778	366	68,010	2
20,815	3,379,275	31,832	275	1,715,929	37,526	2,422	675,647	
563	45,165	3,095	70	17,833	800	62	15,506	3
4,806	312,521	71,373	164	209,317	12,172	925	103,990	
360	816,105	82,449	34	190,942	78,031	127	158,982	4
4,025	4,174,925	1,549,972	621	2,350,116	1,437,856	2,488	2,085,865	
5,935	329,271	15,872	3,992	111,009	32,355	4,877	119,826	5
13,274	1,033,794	250,466	17,583	662,379	487,577	23,511	922,594	
493	43,640	1,471	23	19,694	503	45	17,290	6
2,882	134,738	8,103	113	60,229	2,414	193	38,755	
178,094	1,891,056	836,711	61,435	908,221	787,857	22,559	825,361	7
1,553,404	22,947,000	16,950,638	1,109,546	18,194,027	15,357,411	409,322	15,888,832	
20,791	73,420	152	162	7,212	256	9	5,438	8
63,990	242,454	3,206	309	32,717	980	53	27,765	
208,201	**3,554,214**	**941,419**	**65,737**	**1,368,297**	**902,580**	**28,045**	**1,210,413**	
1,663,196	**32,224,707**	**18,865,590**	**1,129,611**	**23,224,714**	**17,335,936**	**438,911**	**19,743,448**	
50,216	625,682	26,588	10,359	317,284	23,562	7,114	278,471	9
79,996	1,652,568	102,555	16,001	799,591	84,584	10,355	635,290	
90	30,390	958	347	21,023	283	67	27,378	10
1,207	625,195	32,554	4,690	385,087	9,817	994	436,198	
81,023	**2,277,763**	**135,109**	**20,691**	**1,184,678**	**94,401**	**11,349**	**1,071,488**	
1,769,138	**34,646,207**	**19,103,750**	**1,160,985**	**24,524,202**	**17,547,145**	**452,688**	**20,935,298**	
185,308	506,749	91,411	289,435	459,229	231,814	277,144	613,729	11
80,466	146,086	14,644	62,922	87,265	31,594	69,781	118,237	
1,848,760	2,149,778	28,962	999,317	1,127,143	120,254	1,329,986	1,573,750	12
392,798	452,557	6,293	158,856	185,029	22,759	221,931	263,769	
293,243	514,910	–	343,713	492,086	–	527,669	668,153	13
131,676	265,902	–	171,511	238,483	–	260,757	332,183	
836,488	1,032,175	1,792	1,073,431	1,224,632	2	1,278,052	1,412,711	14
790,069	958,671	466	662,948	769,243	2	851,746	946,049	
267,879	268,333	1	237,304	241,651	–	270,625	271,489	15
1,461,322	1,464,778	6	479,480	493,048	–	556,478	558,907	
323,996	372,739	25,082	155,122	185,327	20,836	203,283	229,247	16
3,189,327	**3,669,733**	**46,491**	**1,690,839**	**1,958,395**	**75,191**	**2,163,976**	**2,448,392**	
186,236	187,862	500	104,609	106,113	545	38,955	47,222	17
490,278	501,165	1,650	225,369	229,095	1,063	88,991	103,231	
10,645	106,691	91,651	11,471	103,380	107,252	7,193	115,467	18
23,601	225,623	80,878	15,068	96,438	108,548	9,869	119,717	
552,874	609,077	10,948	273,101	284,049	854	408,216	409,159	19
904,517	1,103,672	45,772	1,285,171	1,342,390	62,235	1,819,474	1,928,336	20
1,157,454	1,477,090	41,996	954,222	1,008,897	52,352	1,215,860	1,300,405	
4,173,007	4,173,007	–	4,886,834	4,886,834	–	2,583,807	2,583,807	21
3,944,645	3,944,645	–	3,283,915	3,283,915	–	2,239,174	2,239,174	
212,447	285,400	30,723	274,868	346,047	47,490	318,691	413,665	22
552,349	874,628	70,042	395,128	556,703	79,196	435,780	620,223	
492,521	5,955,926	239,887	103,372	416,231	930,294	158,401	1,173,454	23
97,400	1,425,452	16,779	10,241	34,543	76,570	19,404	103,595	
462,170	498,585	18,204	257,230	289,635	22,922	335,855	557,277	24
6,790,493	**9,055,100**	**238,847**	**5,188,905**	**5,554,180**	**340,442**	**4,664,158**	**5,349,550**	

[1]Unrevised figures.

13.—Imports of Canada from the United Kingdom, the United States and in the four fiscal

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	United Kingdom.
	I. Agricultural and Vegetable Products (except chemicals, fibres and wood)—concluded.					
	B—Other than Food.					
1	Plants, trees, shrubs and vines	$	20,872	477,368	709,507	32,721
	Rubber and its products—					
2	Rubber and gutta-percha, crude caoutchouc	lb.	6,764,275	6,383,440	24,433,498	4,734,734
		$	3,626,381	2,904,973	12,010,732	2,483,804
3	Tires for vehicles, all kinds	$	22,973	1,987,259	2,014,882	31,007
4	Other manufactures of rubber, etc	$	633,600	3,352,582	4,033,821	1,053,770
	Total rubber and its products	$	**4,282,954**	**8,244,814**	**18,059,435**	**3,568,581**
	Seeds—					
5	Clover seed	lb.	128,252	2,534,024	2,662,276	70
		$	84,669	1,217,628	1,302,297	29
6	Flax seed	bush.	980	49,890	107,522	397
		$	13,165	250,221	431,455	4,475
7	Garden, field and other seeds	$	100,672	560,315	721,549	62,703
8	Timothy seed	lb.	–	11,480,762	11,498,560	–
		$	–	1,486,594	1,488,800	–
	Total seeds	$	**335,829**	**3,611,478**	**4,210,782**	**242,854**
	Tobacco—					
9	Tobacco, unmanufactured	lb.	26,128	23,398,746	24,345,295	47,401
		$	34,873	12,878,163	13,604,757	38,543
	Tobacco, manufactured—					
10	Cigars	lb.	21	1,771	26,698	149
		$	171	10,905	175,130	1,443
11	Cigarettes	lb.	14,732	3,575	19 923	13,541
		$	66,517	10,879	84,364	72,139
12	Tobacco, cut	lb.	118,512	350,437	504,720	160,913
		$	287,339	372,018	674,893	489,514
	Total tobacco	lb.	**221,059**	**23,775,958**	**25,982,143**	**266,098**
		$	**506,699**	**13,195,990**	**14,673,559**	**699,890**
	Other vegetable products—					
13	Broom corn	$	–	840,180	840,180	–
14	Drugs, crude, barks, flowers, etc	$	14,180	230,937	292,141	7,981
15	Hay	ton	–	20,212	20,212	–
		$	–	538,155	538,155	–
16	Starch, farina, corn starch, etc	lb.	30,486	1,507,849	1,585,167	42,131
		$	4,149	100,985	109,060	6,141
17	Turpentine, spirits of	gal.	21	1,025,723	1,025,744	5
		$	56	1,372,708	1,372,764	48
18	All other vegetable products	$	10,498	475,695	502,784	8,167
	Total other vegetable products	$	**28,883**	**3,558,660**	**3,655,084**	**22,337**
	Total Agricultural and Vegetable Products, other than Food	$	**12,447,461**	**46,473,994**	**70,100,231**	**29,887,662**
	Total Agricultural and Vegetable Products	$	**17,004,533**	**124,294,388**	**241,846,147**	**38,724,082**

All Countries in quantities and values, by classes entered for consumption, years 1920-1923—con.

1921.		1922.			1923[1].			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
450,380	993,045	23,621	343,845	934,242	24,162	411,451	1,064,311	1
7,544,661	22,806,180	820,963	13,264,904	18,952,465	4,107,146	14,536,757	25,391,333	2
1,977,845	8,887,196	133,461	2,261,452	3,437,716	873,654	3,391,920	5,620,621	
2,193,992	2,310,941	16,254	1,157,261	1,188,981	21,493	1,296,592	1,322,050	3
3,083,341	4,282,823	678,340	1,808,037	2,515,561	787,513	2,150,016	2,974,166	4
7,255,178	**15,480,960**	**828,055**	**5,226,759**	**7,142,258**	**1,682,660**	**6,838,528**	**9,916,837**	
2,596,382	2,598,380	481,610	3,063,049	3,547,080	335,563	1,912,102	2,248,010	5
559,276	560,247	100,620	613,458	715,209	87,260	372,139	459,639	
315,352	536,679	140	1,696	284,476	–	7,323	58,949	6
1,221,155	2,048,154	876	8,237	445,605	–	15,006	115,773	
601,055	721,463	55,950	476,896	592,773	53,833	623,635	746,215	7
9,281,201	9,281,201	1,090	12,851,393	12,852,483	75	13,469,151	13,469,226	8
814,023	814,023	547	925,803	926,350	23	975,857	975,880	
3,449,097	**4,732,501**	**265,019**	**2,077,032**	**2,936,335**	**182,658**	**2,017,061**	**2,528,111**	
19,032,367	20,007,411	17,762	19,848,439	20,870,509	14,857	13,063,379	14,548,694	9
12,108,281	13,083,293	7,649	8,108,639	8,867,469	4,944	4,686,642	5,854,405	
1,150	28,666	167	1,003	15,081	361	1,001	18,915	10
7,693	205,322	1,315	7,901	125,266	2,763	6,401	133,715	
10,801	25,611	20,247	5,894	27,136	19,599	15,205	36,127	11
27,582	105,309	86,395	17,432	110,261	78,707	38,109	120,492	
279,865	474,000	154,656	182,864	359,721	214,346	145,501	393,631	12
346,224	852,746	445,443	243,822	699,262	656,798	168,388	841,407	
19,348,484	**20,614,167**	**251,069**	**20,064,323**	**21,359,669**	**396,220**	**13,237,322**	**15,068,497**	
12,519,056	**14,355,294**	**664,187**	**8,399,873**	**9,947,903**	**866,284**	**4,914,135**	**7,089,461**	
511,222	511,222	–	327,114	327,114	–	685,819	685,819	13
249,005	315,187	8,663	128,309	155,579	2,293	135,795	168,643	14
50,789	50,789	–	28,998	28,999	–	36,994	37,040	15
1,300,892	1,300,892	–	464,458	464,490	–	614,761	616,148	
4,492,281	4,766,832	67,508	2,866,910	3,256,616	126,496	3,032,625	4,322,479	16
228,159	251,003	8,674	105,379	130,260	10,675	121,713	170,982	
791,323	791,331	4	977,867	977,871	3	975,807	975,810	17
1,131,170	1,131,324	12	757,941	757,953	4	1,210,109	1,210,114	
524,957	553,730	6,844	232,363	257,487	31,407	600,888	681,125	18
3,945,405	**4,063,358**	**24,193**	**2,015,564**	**2,092,883**	**44,379**	**3,369,085**	**3,532,831**	
39,822,262	**87,489,263**	**21,195,813**	**26,325,293**	**55,319,493**	**29,763,984**	**24,929,573**	**52,968,022**	
119,614,933	**259,431,110**	**27,950,425**	**84,803,204**	**172,665,523**	**26,666,163**	**73,049,546**	**161,669,784**	

[1]Unrevised figures.

13.—Imports of Canada from the United Kingdom, the United States and in the four fiscal

No.	Principal articles by classes.		1920. United Kingdom.	United States.	All Countries.	United Kingdom.
	II. Animals and Animal Products (except chemicals and fibres).					
1	Animals, living	$	196,178	2,372,530	2,570,377	397,720
2	Bone, ivory and shell products	$	156,551	478,425	675,572	267,021
3	Feathers and quills	$	67,185	435,222	585,094	91,920
	Fishery products—					
4	Cod, haddock and pollock, fresh	lb.	–	2,658,136	2,836,678	–
		$	–	100,405	108,914	–
5	Halibut, fresh	lb.	–	1,094,387	2,045,270	–
		$	–	119,356	205,789	–
6	Oysters, shelled, in bulk	gal.	–	174,414	174,414	–
		$	–	406,051	406,051	–
7	Salmon, fresh	lb.	–	200,913	900,521	–
		$	–	25,870	76,960	–
8	Sardines and anchovies	box	212,391	226,266	3,461,948	376,608
		$	33,961	41,441	526,194	54,005
9	Cod, haddock, pollock, dried	lb.	–	153,029	3,068,584	112
		$	–	9,255	328,492	4
10	Herrings, pickled or salted	lb.	620,557	339,662	11,289,472	1,011,438
		$	46,435	29,842	555,520	83,426
	Total fishery products	$	**136,999**	**1,687,581**	**3,678,019**	**201,329**
	Furs, hides, leather and their products—					
11	Fur skins, all kinds, not dressed	$	318,383	9,419,845	10,295,065	319,378
12	Fur skins, wholly or partly dressed	$	104,769	686,554	1,329,607	82,775
13	Hatters' furs, not on the skin	$	49,923	542,378	592,301	49,817
	Total furs and skins	$	**697,910**	**10,989,174**	**12,877,520**	**509,919**
14	Total hides and skins	$	659,217	12,627,989	22,654,661	492,734
	Leather and manufactures of—					
15	Belting leather	$	127,761	123,283	251,044	395,595
16	Calf, kid or goat, lamb and sheep skins, dressed, waxed, or glazed	$	91,061	5,848,659	5,956,753	152,188
17	Glove leathers, tanned or dressed	$	18,122	2,067,797	2,099,797	94,845
18	Upper leather, including dongola, etc	$	321,887	1,489,515	1,811,402	356,494
19	Boots and shoes, slippers and insoles	$	94,009	2,611,964	2,711,622	358,451
	Total leather and manufactures of	$	**1,125,507**	**15,742,091**	**17,102,802**	**2,075,621**
20	Hair and bristles	$	132,220	473,420	740,904	111,256
	Meats—					
21	Beef, fresh, chilled or frozen	lb.	–	1,811,609	1,811,609	–
		$	–	230,240	230,240	–
22	Mutton and lamb, fresh, chilled or frozen	lb.	–	2,365,105	4,842,904	–
		$	–	490,182	803,774	–
23	Pork, fresh, chilled or frozen	lb.	–	46,293,256	46,305,353	–
		$	–	14,405,277	14,407,467	–
24	Bacon and hams, shoulders and sides, cured	lb.	20	4,973,539	4,977,954	303
		$	12	1,384,409	1,385,965	111
25	Canned meats, poultry and game	lb.	240,819	585,280	1,017,871	1,130,112
		$	91,824	162,972	331,727	304,180
26	Pork, dry salted and in brine	lb.	–	13,303,215	13,311,133	–
		$	–	3,150,515	3,153,659	–
27	Soups and extracts	$	23,252	697,284	755,352	10,242
	Total meats	$	**214,555**	**21,379,662**	**22,100,333**	**368,495**

All Countries in quantities and values, by classes entered for consumption, years 1920-1923—con.

1921.		1922.			1923[1].			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
2,672,951	3,071,991	113,124	2,375,813	2,504,015	69,065	2,292,022	2,366,865	1
601,718	1,012,695	62,693	186,981	305,963	116,090	220,633	431,613	2
340,317	533,552	45,524	219,190	307,511	24,202	181,707	242,305	3
897,263	1,111,052	–	535,784	721,763	–	625,314	1,161,541	4
36,007	45,222	–	20,989	28,660	–	24,276	44,434	
498,550	2,617,947	–	465,735	2,550,797	–	956,827	2,644,343	5
60,315	247,764	–	48,712	195,416	–	77,331	225,854	
143,576	143,576	–	132,106	132,106	–	140,371	140,371	6
356,038	356,038	–	298,653	298,653	–	300,918	300,918	
738,861	1,572,832	–	845,080	2,074,790	–	2,056,500	2,787,999	7
91,989	165,717	–	46,843	165,106	–	110,943	174,017	
400,261	3,945,698	289,654	334,637	4,492,554	140,584	133,396	4,509,579	8
39,977	709,164	35,513	38,973	471,448	15,100	17,759	427,542	
18,728	9,186,954	–	37,944	8,111,818	150	41,045	6,482,282	9
2,730	874,001	–	5,583	470,713	23	5,789	382,976	
310,650	9,934,208	1,205,909	252,144	10,024,124	1,037,393	663,760	10,120,388	10
25,126	427,935	76,499	18,753	330,774	62,510	52,947	298,501	
1,147,557	**3,947,608**	**156,689**	**1,210,477**	**3,071,034**	**133,794**	**1,085,611**	**2,813,107**	
3,606,108	4,624,227	63,597	6,218,494	6,498,585	231,926	5,089,114	5,757,234	11
457,046	1,123,599	36,869	538,035	1,240,645	48,518	418,766	1,064,968	12
513,205	603,810	32,792	153,188	245,909	14,445	208,633	302,568	13
4,689,101	**6,586,525**	**169,295**	**7,025,455**	**8,151,517**	**322,965**	**5,806,495**	**7,245,924**	
4,436,390	10,652,787	75,402	3,405,013	5,898,087	149,770	3,747,703	7,947,410	14
73,736	469,331	150,048	35,588	185,636	138,332	49,978	188,110	15
1,643,495	1,799,308	58,406	1,648,433	1,731,605	82,275	1,035,072	1,120,850	16
1,855,409	2,068,913	10,817	686,378	711,872	35,211	883,072	926,470	17
508,271	868,298	155,170	429,408	603,138	364,072	385,287	759,319	18
1,803,442	2,175,209	335,761	977,788	1,327,561	409,913	785,912	1,204,904	19
7,842,171	**10,545,004**	**1,139,069**	**5,318,698**	**6,875,582**	**1,438,646**	**4,785,610**	**6,467,517**	
601,676	959,921	65,971	339,841	532,228	132,289	431,908	607,236	20
1,541,431	1,632,862	–	72,808	73,512	–	115,064	115,064	21
290,125	299,542	–	20,051	20,085	–	33,943	33,943	
2,910,737	7,847,701	–	2,630,357	3,416,332	–	1,147,018	1,460,130	22
562,806	1,272,165	–	420,794	533,005	–	226,384	261,382	
22,402,444	22,402,444	3,585	28,595,181	28,600,126	–	33,098,670	33,098,701	23
3,862,311	3,862,311	611	4,443,123	4,443,933	–	5,134,045	5,134,061	
6,817,359	6,823,423	1,200	6,901,466	6,902,688	2,803	4,661,262	4,664,217	24
1,545,380	1,548,084	496	1,242,414	1,242,918	1,242	671,754	673,035	
450,719	2,026,085	817,478	475,227	2,251,556	635,318	292,868	1,644,993	25
134,857	557,811	193,090	117,953	492,218	117,453	62,033	262,861	
12,908,149	12,911,847	400	9,422,215	9,424,560	–	14,605,259	14,606,506	26
2,172,715	2,173,799	75	978,033	978,468	–	1,637,729	1,637,993	
795,300	818,409	1,630	772,914	775,636	7,107	923,973	923,015	27
10,128,794	**11,428,483**	**303,322**	**8,395,529**	**9,002,611**	**210,959**	**8,985,807**	**9,317,701**	

[1] Unrevised figures.

13.—Imports of Canada from the United Kingdom, the United States and in the four fiscal

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	United Kingdom.
	II. Animals and Animal Products (except chemicals and fibres)—concluded.					
	Milk products—					
1	Butter	lb.	–	188,271	397,955	112
		$	–	96,098	176,994	49
2	Casein	lb.	48,160	1,142,383	1,234,635	224
		$	7,646	145,799	159,177	125
3	Cheese	lb.	2,014	349,488	362,693	7,491
		$	1,014	194,791	206,500	4,582
	Total milk and milk products	$	**8,853**	**465,877**	**572,053**	**6,352**
	Oils, fats, greases and waxes—					
4	Animal oils	gal.	–	279,059	279,059	9,086
		$	–	609,917	609,917	11,935
5	Fish, whale and seal oils	gal.	53	46,805	162,040	655
		$	126	62,238	262,078	2,133
6	Lard	lb.	–	7,293,358	7,293,438	–
		$	–	1,720,076	1,720,088	–
7	Lard compound, etc	lb.	55,103	2,374,186	2,467,511	264,412
		$	14,635	480,575	500,325	70,271
8	Grease, rough	lb.	173,185	7,511,137	9,657,763	637,220
		$	18,996	1,141,225	1,379,829	57,013
9	Grease and degras	lb.	91,097	1,094,914	1,186,011	169,554
		$	10,640	124,912	135,552	14,916
10	Oleomargarine	lb.	–	6,497,031	6,497,031	–
		$	–	1,872,104	1,872,104	–
	Total oils, fats, greases and waxes	$	**69,745**	**6,237,678**	**6,249,485**	**185,461**
	Miscellaneous animal products—					
11	Eggs	doz.	3	5,900,279	5,977,480	1
		$	30	2,814,484	2,837,442	15
12	Gelatine and isinglass	lb.	265,381	550,066	983,988	402,119
		$	181,595	377,232	663,228	273,945
13	Glue, powdered or sheet and liquid	$	93,676	369,255	471,509	150,064
14	Honey and imitations thereof	lb.	102,740	126,625	281,838	39,144
		$	18,503	35,106	63,272	5,939
15	Sausage casings, n.o.p.	$	7,726	223,418	364,489	2,133
	Total Animals and Animal Products (except chemicals and fibres)	$	**3,789,311**	**77,010,313**	**95,098,743**	**5,148,783**
	III. Fibres, Textiles and Textile Products.					
	Cotton and its products—					
16	Cotton, wool or raw cotton, not dyed	lb.	–	96,471,550	96,471,550	312
		$	–	33,854,457	33,854,457	156
17	Crochet and knitting cotton	lb.	323,786	142,634	467,915	268,985
		$	639,680	144,111	787,980	783,885
18	Sewing cotton thread in hanks	lb.	194,160	207,501	401,661	325,102
		$	275,582	303,729	579,311	731,229
19	Sewing thread on spools	$	95,162	332,231	429,263	179,970
20	Yarn, cotton, No. 40 and finer	lb.	868,490	1,080,144	1,948,634	1,786,252
		$	1,413,941	1,538,809	2,952,750	4,098,071
21	Yarn, cotton, polished or glazed	lb.	17,563	236,032	253,595	78,405
		$	28,567	198,838	227,405	159,467

All Countries in quantities and values, by classes entered for consumption, years 1920-1923—con.

1921.		1922.			1923[1].			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
2,207,077	3,741,628	2,149,704	1,363,021	6,078,882	280,982	1,523,381	3,767,573	1
886,555	1,805,709	621,779	458,306	1,883,013	109,613	578,775	1,349,819	
170,954	1,043,713	–	105,062	217,613	22,091	379,056	643,347	2
23,571	129,017	–	11,697	19,689	3,899	50,012	92,710	
453,882	551,040	26,546	724,981	877,357	22,519	614,872	916,517	3
206,585	253,647	11,801	226,390	325,297	10,109	170,543	327,022	
1,182,180	**2,255,561**	**646,774**	**742,767**	**2,288,273**	**154,948**	**850,096**	**1,844,212**	
175,734	184,720	199	66,457	66,709	5,871	97,255	104,890	4
267,830	279,765	235	59,831	60,192	5,766	80,149	87,624	
50,844	201,568	524	34,606	128,490	1,463	58,592	171,670	5
55,845	278,340	632	21,022	71,844	1,353	36,921	108,682	
11,493,226	11,493,226	56	9,091,109	9,091,245	–	10,551,570	10,551,616	6
1,902,768	1,902,768	11	948,068	948,087	–	1,144,120	1,144,141	
2,980,996	3,245,408	310,416	2,778,063	3,088,479	198,811	2,316,924	2,516,071	7
397,121	467,392	39,570	253,410	292,980	22,134	221,582	243,748	
13,574,343	14,310,759	18,086	16,442,645	16,524,853	26,486	13,345,853	13,435,359	8
1,459,783	1,532,550	1,332	1,044,309	1,049,222	1,092	934,799	938,123	
718,712	906,395	185,188	809,994	1,004,616	248,157	1,136,585	1,397,969	9
73,048	91,265	7,337	57,836	65,531	7,778	56,584	65,038	
4,630,747	4,630,747	6,000	1,339,784	1,345,784	–	1,165,440	1,165,440	10
1,206,351	1,206,351	1,399	255,994	257,393	–	190,782	190,782	
5,536,324	**5,986,296**	**59,715**	**2,805,119**	**2,927,360**	**50,709**	**2,843,829**	**2,975,925**	
5,201,417	5,341,936	6	9,377,769	9,637,303	80	8,256,168	8,319,622	11
2,292,912	2,344,297	39	3,162,143	3,239,480	137	2,494,650	2,508,504	
422,030	1,103,800	267,679	230,224	749,007	365,708	207,526	787,649	12
302,313	756,568	119,922	222,013	461,693	108,404	160,492	348,391	
531,917	701,877	102,247	158,189	294,792	196,044	126,700	363,054	13
203,936	683,149	10,947	407,306	555,989	1,644	303,944	431,293	14
42,640	128,751	1,845	75,099	92,534	226	40,544	52,406	
234,912	395,401	–	236,946	313,844	–	275,540	413,010	15
43,911,179	**61,722,390**	**3,092,895**	**36,110,305**	**46,645,789**	**3,143,223**	**34,812,367**	**46,736,774**	
97,903,804	98,631,504	276,971	94,961,143	95,385,978	40,708	125,159,943	125,261,470	16
28,164,088	28,541,989	69,145	16,207,537	16,321,317	2,183	28,318,681	28,324,704	
77,713	352,259	17,892	57,746	93,603	51,924	173,976	263,221	17
108,251	906,157	47,152	71,031	145,397	101,083	188,587	383,321	
201,585	526,687	393,905	210,170	604,146	633,607	265,162	898,769	18
396,759	1,127,988	422,906	238,249	661,294	606,746	255,847	862,593	
377,137	571,634	70,729	215,348	315,395	30,211	156,305	188,310	19
948,071	2,739,433	1,125,451	1,240,100	2,371,419	1,311,865	1,655,601	2,967,806	20
1,949,410	6,054,981	1,115,769	1,266,305	2,395,075	1,111,889	1,577,215	2,690,034	
189,695	268,100	3,873	254,869	258,742	29,559	189,329	218,888	21
198,702	358,169	4,692	129,727	134,419	17,912	98,325	116,237	

[1] Unrevised figures.

13.—Imports of Canada from the United Kingdom, the United States and in the four fiscal

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	United Kingdom.
	III. Fibres, Textiles and Textile Products—con.					
	Cotton and its products—concluded.					
1	Yarn, knitting, hosiery yarn, etc	lb.	96,315	1,063,738	1,164,639	245,034
		$	138,290	753,102	898,355	345,764
2	Other cotton thread, n.o.p	lb.	36,281	205,614	248,424	53,386
		$	63,805	311,942	381,572	144,142
3	Fabrics, printed, dyed or coloured	yd.	17,356,047	35,733,790	53,416,341	24,976,558
		$	7,261,336	10,793,967	18,238,179	12,104,130
4	Grey unbleached cotton fabrics	yd.	1,695,969	10,912,823	12,608,792	4,882,882
		$	343,122	1,845,554	2,188,676	1,445,736
5	Plain shirtings, cambrics, voiles, scrims, victoria lawns, etc	yd.	2,195,428	2,886,810	5,120,917	4,826,568
		$	655,987	614,107	1,288,244	1,613,687
6	White or bleached cotton fabrics	yd.	3,098,274	11,184,369	14,477,764	4,710,555
		$	869,886	2,565,657	3,508,548	1,682,057
7	Towelling and towels	$	1,304,228	462,354	1,782,829	2,403,398
8	Velvets, velveteens and plush fabrics	yd.	1,343,258	441,898	1,860,508	1,338,958
		$	965,479	582,078	1,623,408	1,206,731
9	Laces and embroidery	$	1,774,322	1,248,327	3,908,543	3,117,261
10	Wearing apparel	$	523,792	4,514,052	5,305,748	1,341,196
	Total cotton and its products	$	**19,339,240**	**68,219,372**	**89,367,984**	**37,103,816**
	Flax, hemp and jute—					
11	Jute or hemp yarn, dyed or coloured	lb.	2,848,642	3,668,690	6,707,002	2,988,571
		$	617,598	740,688	1,445,775	776,800
12	Jute cloth or jute canvas, uncoloured	yd.	18,962,464	9,408,620	63,563,938	9,229,825
		$	3,574,781	1,335,655	8,632,787	2,500,568
13	Other manufactures of	$	4,023,088	1,656,569	5,845,274	5,271,986
	Total flax, hemp and jute	$	**8,215,467**	**3,732,912**	**15,923,836**	**8,549,354**
	Silk and its products—					
14	Silk, raw, spun or thrown, etc	lb.	27,118	313,614	343,668	13,628
		$	149,754	3,228,511	3,404,500	101,898
15	Silk fabrics of which silk is the chief component part	$	19,412	1,491,626	1,755,772	95,498
16	Silk fabrics, n.o.p	$	1,637,210	5,779,355	20,888,357	1,866,753
17	Clothing, silk, n.o.p	$	168,140	1,716,357	2,180,907	321,231
18	Ribbons, all kinds and materials	$	389,496	1,596,053	2,844,386	635,428
	Total silk and its products	$	**3,272,348**	**15,866,297**	**34,432,789**	**4,272,850**
	Wool and its products—					
19	Wool, raw, etc	lb.	3,374,511	5,110,606	11,777,890	2,110,738
		$	2,510,145	3,464,216	7,672,211	1,677,482
20	Noils and waste and worsted tops	$	4,148,050	1,665,830	6,176,394	5,159,112
21	Yarns composed wholly or in part of wool, worsted, the hair of the goat, etc	lb.	1,738,834	174,007	1,932,760	2,755,525
		$	3,332,307	402,557	3,742,087	6,253,721
22	Yarns, woollen or worsted, n.o.p	lb.	240,560	79,776	321,896	303,587
		$	571,283	71,335	653,970	837,610
23	Carpets and rugs	$	980,464	382,751	1,437,959	2,102,583
	Cloths and dress goods—					
24	Cassimeres, cloths and doeskins	$	2,979,764	2,557,951	5,598,264	3,128,107
25	Overcoatings	yd.	58,717	76,642	135,359	64,925
		$	163,382	126,550	289,932	199,501
26	Fabrics of wool, or cotton and wool	yd.	2,515,403	80,016	2,595,419	1,789,598
		$	2,024,231	71,886	2,096,117	1,664,341
27	Tweeds	yd.	2,030,392	2,222,791	4,265,399	2,139,688
		$	4,033,443	3,089,115	7,158,551	4,513,330
28	Women's and children's dress goods, etc.	sq. yd.	3,890,395	56,222	4,044,853	4,757,529
		$	4,696,049	43,138	4,951,614	5,418,919
29	Worsted and serges, including coatings	yd.	4,003,100	3,665,824	7,685,015	5,238,820
		$	10,061,336	6,201,993	16,303,136	14,566,067
	Wearing apparel—					
30	Clothing, women's and children's	$	190,718	2,225,566	2,430,866	268,642
31	Socks and stockings, wool	$	973,081	172,943	1,146,065	2,783,319
32	Clothing, ready-made	$	619,608	859,671	1,479,768	1,286,794
	Total wool and its products	$	**38,555,688**	**22,399,955**	**63,493,535**	**52,767,847**

All Countries in quantities and values, by classes entered for consumption, years 1920-1923—con.

1921.		1922.			1923[1].			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
861,028	1,115,352	126,827	521,818	650,333	209,234	448,811	666,749	1
684,863	1,078,963	75,770	204,688	286,005	99,136	224,349	335,572	
120,397	181,288	25,930	236,416	265,321	61,753	239,092	302,429	2
209,962	371,749	47,809	333,958	386,762	81,901	278,724	362,467	
26,806,036	52,530,220	18,423,924	32,881,666	52,509,492	29,288,845	27,458,611	58,495,746	3
8,255,367	21,052,640	4,988,618	6,462,26	12,096,748	7,271,227	5,600,134	13,511,968	
6,547,795	11,500,490	2,065,217	4,842,707	6,908,551	4,524,104	8,952,413	13,487,895	4
1,486,882	2,948,302	537,548	572,222	1,109,992	475,864	1,011,971	1,493,445	
2,143,764	7,191,343	2,125,524	2,034,300	4,252,362	3,722,059	2,204,332	6,126,912	5
505,553	2,177,493	429,571	290,539	757,042	653,794	317,269	1,022,151	
9,405,616	14,355,543	2,778,483	6,455,917	9,583,472	3,390,570	7,352,507	11,143,215	6
2,382,419	4,167,055	612,301	954,400	1,673,863	689,686	1,113,354	1,922,705	
323,263	2,733,961	2,317,814	374,454	1,068,445	888,102	393,141	1,285,699	7
287,898	1,654,960	525,633	412,393	984,051	742,909	418,603	1,377,875	8
320,246	1,559,783	377,218	419,054	852,100	462,700	356,470	1,012,980	
1,017,542	6,185,966	1,639,586	864,261	4,071,676	1,850,656	793,666	3,963,788	9
3,241,628	4,909,839	557,487	2,753,194	3,550,770	569,731	2,895,059	3,703,052	10
58,384,465	**99,816,594**	**14,016,757**	**35,251,452**	**52,477,828**	**17,877,175**	**47,710,511**	**68,720,272**	
1,751,420	4,950,637	1,512,288	1,030,876	2,638,368	3,559,150	767,823	4,497,210	11
444,987	1,331,563	145,607	142,924	326,407	364,206	114,656	513,550	
3,922,959	61,242,124	5,622,863	21,528,599	68,302,717	10,234,049	9,118,079	80,470,356	12
299,054	6,574,298	699,832	1,128,535	3,879,462	1,206,234	654,890	5,644,617	
1,285,630	7,020,258	2,617,323	1,004,979	3,855,498	3,554,558	1,915,892	5,784,801	13
2,029,671	**14,926,119**	**3,462,762**	**2,276,438**	**8,061,367**	**5,124,998**	**2,685,438**	**11,942,968**	
291,398	318,279	7,950	364,941	394,029	14,357	386,455	404,634	14
2,409,120	2,615,422	34,754	2,501,394	2,655,756	59,200	2,841,208	2,917,034	
591,513	1,428,172	49,758	288,189	753,562	28,043	282,071	636,094	15
2,370,214	16,832,938	887,163	2,847,239	13,270,916	966,726	2,774,789	11,807,716	16
984,976	1,611,595	163,606	1,077,018	1,563,553	161,534	1,099,019	1,578,442	17
868,270	3,882,360	168,534	692,359	1,881,919	177,502	512,204	1,575,726	18
8,699,263	**29,720,792**	**1,823,796**	**8,275,412**	**21,942,338**	**2,230,392**	**8,595,122**	**21,155,876**	
6,670,530	9,285,663	5,373,720	2,578,414	12,661,812	8,913,109	3,225,871	18,273,344	19
3,071,117	5,088,665	1,591,771	606,960	3,179,076	2,733,725	773,653	5,078,929	
1,046,932	6,673,288	2,715,052	210,857	3,357,699	3,638,230	222,684	4,525,784	20
110,615	2,882,166	1,765,523	15,727	1,798,759	2,741,731	123,724	2,939,855	21
158,340	6,454,633	1,982,356	22,726	2,034,893	3,404,195	83,585	3,604,841	
43,713	349,125	241,983	27,154	270,377	323,299	31,842	368,860	22
64,235	919,535	362,745	44,588	418,106	463,894	46,350	535,001	
270,205	2,597,408	1,106,830	259,147	1,559,610	1,080,404	191,188	1,525,623	23
1,322,393	4,674,100	1,705,781	653,527	2,729,954	2,238,244	585,941	3,430,076	24
3,403	69,031	46,341	2,142	49,049	170,753	1,078	174,060	25
10,576	211,820	77,601	5,367	84,003	277,171	1,347	287,061	
10,826	1,800,424	1,936,077	11,668	1,949,745	2,630,955	6,358	2,640,376	26
16,854	1,681,195	1,191,072	15,136	1,208,155	1,447,793	6,279	1,456,062	
420,268	2,585,883	1,706,666	191,246	1,925,303	3,479,248	73,536	3,568,098	27
794,727	5,378,147	2,072,431	329,751	2,448,274	3,414,791	115,443	3,551,511	
658	4,921,659	3,783,880	1,600	3,917,642	4,839,382	315	5,132,410	28
1,584	5,808,510	1,719,411	819	1,834,304	1,938,349	303	2,157,075	
1,103,932	6,453,434	5,297,056	566,657	6,053,591	7,344,721	205,117	7,763,661	29
2,252,381	17,097,360	9,001,126	1,032,920	10,329,758	11,007,787	356,959	11,630,159	
1,293,434	1,586,551	234,284	1,310,254	1,569,205	235,087	888,754	1,145,193	30
80,892	2,864,938	1,329,983	40,436	1,371,731	2,737,424	46,114	2,786,031	31
600,262	1,889,869	894,196	364,161	1,267,454	1,200,218	381,300	1,585,609	32
12,092,437	**67,017,640**	**27,232,945**	**5,383,267**	**35,227,691**	**37,762,683**	**4,038,172**	**45,734,381**	

[1] Unrevised figures.

13.—Imports of Canada from the United Kingdom, the United States and in the four fiscal

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	United Kingdom.
	III. Fibres, Textiles and Textile Products—concluded.					
	Vegetable fibres and their products—					
1	Binder twine	lb.	100	16,304,178	16,304,479	–
		$	29	3,490,468	3,490,524	–
2	Manila grass	cwt.	109	148,460	152,619	–
		$	3,803	1,945,353	1,982,324	–
3	Sisal grass	cwt.	28,872	272,077	301,234	21,884
		$	416,891	2,792,820	3,213,488	276,562
	Mixed textile products—					
4	Rags and waste	$	343,648	2,140,604	2,484,410	589,426
5	Yarn	lb.	278,886	73,092	360,297	301,348
		$	1,037,540	365,235	1,436,738	1,179,213
6	Oil cloth, all kinds	$	469,632	2,053,906	2,523,870	1,132,786
7	Cordage and twines	$	1,120,119	1,826,093	2,988,800	1,892,994
8	Curtains and shams	$	216,219	241,981	474,779	384,622
9	Webbing, elastic and non-elastic	$	13,911	533,572	547,552	50,045
10	Braids or plaits of chips, palm leaf, etc	$	146,626	615,842	1,070,521	147,598
11	Hatters' bands (not cords), bindings and hat sweats, etc	$	33,027	522,298	580,556	61,393
12	Hats, caps and bonnets, straw, grass or chip	$	301,226	1,083,426	1,433,924	425,397
13	Hats, caps and bonnets, beaver, silk or felt[1]	$	204,354	1,142,538	1,500,250	463,906
14	Hats, caps and bonnets, n.o.p	$	151,250	1,108,969	1,282,159	318,610
15	Corsets, all kinds	$	14,385	334,656	350,769	16,587
16	Gloves and mitts	$	195,910	104,068	337,287	596,904
17	Knitted goods of every description	$	198,491	385,252	607,603	386,438
18	Dressing, antiseptic surgical, etc	$	35,842	276,537	312,940	120,715
	Total Fibres, Textiles and Textile Products	$	**74,653,042**	**132,292,083**	**231,559,877**	**111,348,051**
	IV. Wood, Wood Products and Paper.					
	Books and printed matter—					
19	Books, printed, periodicals and pamphlets	$	311,181	2,317,324	2,725,589	695,612
20	Newspapers and quarterly, monthly and semi-monthly magazines	$	40,529	2,378,283	2,420,576	43,705
21	Photographs, chromos, etc	$	94,446	801,094	907,986	154,837
22	Advertising pamphlets, etc	$	33,434	1,375,364	1,411,925	68,968
23	Bank notes, bonds, bills of exchange	$	19,631	442,512	468,438	22,031
24	Labels for cigar boxes, fruits, etc	$	55,519	508,777	568,712	72,872
25	Bibles, prayer books, etc	$	205,089	176,704	481,962	234,786
	Total books and printed matter	$	**1,039,609**	**9,886,351**	**11,228,018**	**1,794,318**
	Paper and manufactures of—					
26	Cardboard, millboard, strawboard, newsboard, etc	$	2,382	929,980	932,362	39,687
27	Book and printing paper, not coated	lb.	48,270	5,385,458	5,434,828	366,504
		$	15,000	600,825	615,999	75,770
28	Wrapping paper, all kinds	lb.	196	5,231,697	5,259,482	208,975
		$	118	502,887	511,136	31,115
29	Hangings or wall paper	roll	26,229	2,073,058	2,100,679	72,573
		$	12,852	340,525	355,272	45,350
30	Boxes or containers, printed or not	$	14,901	1,003,130	1,039,259	32,871
	Total paper and manufactures (except books and printed matter)	$	**317,740**	**9,316,752**	**9,949,574**	**851,508**
	Wood, unmanufactured or partially manufactured—					
31	Fence posts and railroad ties	$	–	1,105,348	1,105,348	–
32	Cherry, chestnut and hickory	M ft.	–	14,929	14,929	–
		$	–	932,018	932,018	–
33	Mahogany	lt.	–	1,757,619	1,757,619	1,230
		$	–	320,492	320,492	638
34	Oak	M ft.	1	46,843	46,844	–
		$	51	3,319,218	3,319,269	–
35	Pitch pine	M ft.	–	29,541	29,541	–
		$	–	1,034,053	1,034,053	–

[1]Felt only in 1922, 1923.

All Countries in quantities and values, by classes entered for consumption, years 1920-1923—con.

1921.		1922.			1923[1].			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
34,641,459	34,755,071	106,660	46,651,936	46,758,792	3,062,720	46,927,667	49,990,387	1
5,466,395	5,480,897	17,842	7,351,011	7,368,892	379,453	4,820,569	5,200,022	
78,039	87,838	–	21,010	42,249	–	37,598	52,089	2
1,405,797	1,515,962	–	185,094	329,545	–	281,496	372,644	
342,612	365,916	18,032	126,934	145,272	29,949	134,780	164,729	3
2,770,810	3,060,571	182,503	854,743	1,038,494	226,975	897,529	1,124,504	
1,674,206	2,273,720	85,177	624,136	724,702	212,928	810,206	1,047,283	4
112,492	512,109	285,778	186,122	570,450	469,201	178,446	933,791	5
403,782	2,037,142	695,173	435,251	1,347,871	1,159,837	427,595	2,248,997	
1,305,136	2,438,543	490,143	764,999	1,258,679	558,563	878,902	1,439,699	6
1,569,749	3,517,835	961,049	856,917	1,872,032	1,223,150	1,212,607	2,476,661	7
156,456	636,957	225,833	120,465	406,233	247,671	100,861	406,389	8
531,216	589,280	19,940	361,524	381,491	17,228	337,862	355,109	9
401,831	1,258,935	45,545	283,288	560,070	46,192	229,189	479,607	10
411,594	719,666	33,130	356,139	537,585	28,071	396,760	497,765	11
693,119	1,171,407	261,651	626,749	948,729	335,032	519,510	883,733	12
698,851	1,642,720	383,943	563,618	1,054,584	377,362	614,143	1,231,864	13
860,159	1,242,302	160,742	767,249	969,587	204,137	763,264	1,000,630	14
286,045	303,232	2,994	272,742	276,412	5,612	228,825	235,252	15
103,360	789,380	193,827	113,983	437,280	534,731	180,360	990,780	16
429,848	861,671	189,782	782,974	993,050	343,642	680,803	1,076,135	17
339,024	461,181	85,844	246,881	336,761	109,292	228,353	341,690	18
101,738,045	**243,608,342**	**50,892,567**	**67,619,469**	**139,997,137**	**69,339,824**	**77,285,998**	**170,146,958**	
2,315,693	3,205,995	582,674	1,964,810	2,692,731	522,056	1,841,154	2,503,514	19
2,625,625	2,672,585	47,911	2,557,432	2,607,312	25,767	1,950,556	1,978,620	20
1,081,202	1,257,569	124,944	868,821	1,022,184	115,137	685,375	818,326	21
1,735,818	1,807,330	64,548	1,731,942	1,814,055	84,318	1,476,814	1,581,990	22
646,302	674,950	23,816	471,616	501,769	24,331	458,771	487,294	23
621,108	702,029	41,571	463,795	508,788	41,787	415,430	461,898	24
189,690	656,074	252,933	183,767	660,184	200,183	169,745	454,239	25
11,104,846	**13,566,535**	**1,727,336**	**9,872,506**	**12,161,352**	**1,508,489**	**8,576,737**	**10,501,511**	
1,655,821	1,697,548	15,445	825,883	842,193	16,583	762,488	780,183	26
6,953,832	7,321,606	172,979	4,924,509	5,145,500	1,288,386	5,220,958	6,548,503	27
870,344	946,488	34,234	416,342	455,530	97,086	401,017	500,622	
6,501,440	6,784,724	149,460	3,902,140	4,063,613	369,359	8,011,233	9,005,749	28
717,550	759,320	17,712	246,189	266,063	36,543	477,281	549,239	
1,783,040	1,869,849	81,335	1,096,429	1,193,260	66,687	1,834,402	1,934,760	29
458,010	512,071	36,678	243,806	289,234	34,257	315,961	357,881	
1,405,262	1,473,436	19,507	744,121	804,464	17,040	622,892	647,706	30
12,248,746	**13,645,321**	**599,089**	**6,823,876**	**7,949,428**	**856,896**	**7,177,981**	**8,481,676**	
1,749,192	1,749,192	–	1,835,196	1,835,196	–	625,145	627,292	31
10,024	10,024	–	6,095	6,095	–	10,777	10,777	32
1,136,901	1,136,901	–	481,568	481,568	–	922,176	922,176	
2,146,590	2,258,002	31,399	675,989	707,988	10,860	831,455	860,381	33
548,325	561,371	6,743	128,975	135,718	2,192	120,254	124,255	
37,327	37,418	–	20,552	20,599	–	34,406	34,441	34
4,506,207	4,517,795	–	1,541,668	1,548,494	7	2,286,744	2,288,968	
37,468	37,468	–	27,895	27,895	–	26,788	26,788	35
1,773,164	1,773,164	–	724,657	724,657	–	1,048,129	1,048,129	

[1]Unrevised figures.

13.—Imports of Canada from the United Kingdom, the United States and in the four fiscal

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	United Kingdom.
	IV. Wood, Wood Products and Paper-concluded.					
	Wood, unmanufactured or partially manufactured—concluded.					
1	Lumber, rough sawn or dressed on one side only	M ft.	1	76,702	76,767	1
		$	113	3,016,974	3,021,015	114
2	Veneers of oak, rosewood, mahogany, etc	$	201	549,767	549,968	17
	Total wood, unmanufactured or partially manufactured	$	**10,375**	**14,038,026**	**14,112,391**	**69,129**
	Wood, manufactured—					
3	Barrels, empty	No.	786	276,077	277,985	1,425
		$	997	352,127	354,215	1,871
4	Staves of oak, sawn, split or cut	M	–	6,640	6,640	–
		$	–	383,928	383,928	–
5	Corks	lb.	21,044	112,456	338,229	43,062
		$	20,358	97,469	195,942	45,877
	Wood pulp—					
6	Soda pulp	lb.	–	1,654,209	1,654,209	–
		$	–	77,056	77,056	–
7	Unbleached sulphite pulp	lb.	–	23,448,342	23,448,342	–
		$	–	477,070	477,070	–
8	Bleached sulphite pulp	lb.	–	195,388	195,388	–
		$	–	10,479	10,479	–
9	Wood pulp, mechanically or chemically prepared	lb.	7,164	1,152,956	1,160,120	2,145
		$	1,870	51,445	53,315	652
10	Fibre, kartavert, indurated fibre, etc	$	96	442,558	442,656	2,299
11	Furniture, house, office, cabinet, etc	$	59,955	1,343,984	1,461,411	112,064
	Total Wood, Wood Products and Paper	$	**1,515,780**	**40,719,024**	**43,183,267**	**3,144,574**
	V. Iron and its Products.					
12	Iron ore	ton	–	1,144,430	1,632,011	–
		$	–	4,093,839	4,601,716	–
13	Pigs, ingots, blooms and billets	$	266,944	1,487,683	1,754,627	755,689
14	Scrap iron or steel	$	105	446,840	449,083	2,000
15	Castings and forgings, n.o.p	$	109,530	6,409,540	6,519,188	640,288
	Rolling mill products—					
16	Rolled iron or steel and cast steel in bars, bands, hoops, etc	cwt.	38,318	789,130	834,437	151,758
		$	670,446	4,563,307	5,394,374	2,223,571
17	Rolled iron or steel hoop, scroll or strip, No. 14 gauge and thinner	cwt.	606	122,512	123,118	8,372
		$	3,241	501,636	504,877	75,401
18	Rolled iron or steel hoop, band, scroll or strip, 14 gauge and thinner, galvanized	cwt.	1,717	124,705	126,641	6,773
		$	12,781	608,042	630,995	74,496
19	Steel, rolled, for saws and straw cutters, not tempered or ground	cwt.	1	25,273	25,274	269
		$	11	323,559	323,570	24,475
20	Bar iron or steel, rolled	cwt.	–	688,221	688,221	690
		$	–	1,854,011	1,854,011	8,041
21	Iron and steel railway bars or rails	ton	–	7,206	7,206	–
		$	–	370,824	370,824	–
22	Shafting, round, steel, in bars, etc	cwt.	–	31,268	31,268	53
		$	–	144,807	144,807	2,170
	Plates and sheets—					
23	Boiler plate of iron or steel	cwt.	473	148,805	149,278	–
		$	1,411	526,133	527,544	–
24	Canada plates, Russia iron, terne plate	cwt.	1,934	174,087	176,021	9,289
		$	15,485	901,722	917,207	89,449
25	Iron sheets and plates, tin	cwt.	9,476	928,771	938,247	21,584
		$	118,661	6,556,216	6,674,877	297,317
26	Rolled iron or steel plates not less than 30 inches in width	cwt.	–	419,843	419,843	–
		$	–	1,168,601	1,168,601	–

All Countries in quantities and values, by classes entered for consumption, years 1920-1923—con.

1921.		1922.			1923[1].			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
49,320	49,510	–	48,569	48,787	–	56,825	57,125	1
3,107,519	3,119,994	152	1,631,840	1,640,604	57	2,027,931	2,038,880	
649,845	649,862	–	264,834	264,834	–	225,427	225,427	2
18,560,838	**18,707,787**	**24,669**	**8,827,011**	**8,931,103**	**14,369**	**9,695,127**	**9,758,613**	
202,496	205,077	117	126,223	127,016	790	92,883	94,989	3
323,370	326,970	257	153,302	155,150	1,002	148,919	152,488	
6,639	6,369	–	2,814	2,814	–	3,714	3,714	4
459,106	459,106	–	184,283	184,283	–	207,101	207,101	
97,394	526,018	33,884	45,445	251,914	8,662	115,394	262,673	5
79,138	330,719	33,581	43,730	185,270	6,481	85,455	156,340	
1,415,561	1,415,561	–	813,791	813,791	–	3,333,780	3,333,780	6
94,898	94,898	–	35,156	35,156	–	123,770	123,770	
28,986,667	28,986,667	–	27,034,427	27,034,427	–	31,007,353	31,007,353	7
1,301,266	1,301,266	–	1,009,905	1,009,905	–	830,092	830,092	
–	–	–	149,866	149,866	–	356,259	356,259	8
–	–	–	6,018	6,018	–	14,495	14,495	
19,764,137	19,766,282	2,800	466,135	468,935	5,964	240,210	246,394	9
1,270,841	1,271,493	842	19,437	20,279	978	11,984	12,987	
478,073	480,389	1,063	299,169	300,450	2,011	355,317	357,521	10
1,433,518	1,686,159	101,537	947,872	1,219,689	144,297	1,039,634	1,326,114	11
52,359,847	**57,449,384**	**2,657,542**	**31,423,889**	**35,791,487**	**2,708,338**	**31,841,957**	**35,845,544**	
1,305,512	1,950,291	—	509,185	656,902	88	701,493	1,044,999	12
5,038,900	5,595,038	—	1,721,438	1,936,247	2,889	2,059,109	2,588,536	
3,804,163	4,638,987	76,585	819,981	932,370	949,467	1,284,720	2,277,435	13
2,405,913	2,419,194	193	338,042	343,380	–	236,517	242,632	14
6,149,501	6,790,520	661,214	3,124,351	3,787,460	258,102	3,046,274	3,304,595	15
1,977,212	2,138,578	46,371	355,164	405,251	65,179	373,813	445,723	16
11,587,594	13,876,312	453,182	2,028,209	2,523,985	546,603	2,134,392	2,832,298	
212,718	221,090	–	85,824	85,824	1,185	246,120	247,305	17
1,158,614	1,234,015	–	289,992	289,992	2,963	821,472	824,435	
216,998	223,948	1,999	62,814	63,814	23,921	197,592	222,588	18
1,124,797	1,206,659	7,350	286,445	286,445	80,316	749,631	864,550	
30,874	31,143	23	5,428	5,451	20	18,137	18,157	19
483,477	507,952	844	78,963	79,807	1,203	227,660	228,863	
1,669,828	1,670,518	5,510	647,161	667,100	89,566	1,541,982	1,648,080	20
4,690,905	4,698,946	14,760	1,483,834	1,531,563	207,789	3,462,780	3,704,864	
20,224	20,224	13	16,828	16,851	540	30,910	31,674	21
980,191	980,191	560	858,608	859,613	15,658	1,149,411	1,172,171	
79,367	79,420	–	17,144	17,144	304	56,899	57,203	22
405,575	407,745	–	69,744	69,744	949	173,916	174,865	
260,900	260,900	–	60,433	60,433	5,665	138,834	144,499	23
1,040,554	1,040,554	–	154,114	154,114	13,263	346,145	359,408	
188,167	197,456	18,982	135,194	154,176	119,884	187,531	307,415	24
1,153,659	1,243,108	84,476	577,644	662,120	470,486	765,887	1,236,373	
1,164,192	1,185,776	267,837	474,376	742,213	750,586	367,751	1,068,337	25
8,605,139	8,902,463	1,288,213	2,727,087	4,015,300	3,051,884	1,748,242	4,800,126	
877,637	877,478	188	249,802	249,990	6,561	588,174	595,824	26
2,603,421	2,603,921	382	532,150	532,532	12,512	1,148,905	1,163,292	

[1]Unrevised figures.

13.—Imports of Canada from the United Kingdom, the United States and in the four fiscal

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	United Kingdom.
	V. Iron and its Products—con.					
	Plates and sheets—concluded.					
1	Rolled iron or steel plates or sheets, sheared or unsheared, etc.	cwt.	–	246,971	246,971	143
		$	–	858,598	858,598	1,452
2	Rolled iron or steel sheets, polished or not	cwt.	15,120	582,264	597,607	60,634
		$	116,256	2,979,161	3,116,007	628,478
3	Sheets, flat, of galvanized iron or steel	cwt.	21,827	161,090	182,979	89,060
		$	163,369	912,819	1,076,188	982,085
4	Skelp iron or steel, sheared or rolled in grooves	cwt.	–	1,706,789	1,706,789	–
		$	–	4,330,586	4,330,586	–
5	Rolled round wire rods of iron or steel	cwt.	–	625,126	625,126	–
		$	–	1,515,169	1,515,169	–
6	Rolled iron or steel angles, tees, beams, etc.	cwt.	271	416,782	417,053	1,308
		$	1,693	1,135,348	1,137,041	11,846
7	Rolled iron or steel angles, beams, channels and other rolled shapes, etc.	cwt.	–	1,069,037	1,069,037	1,721
		$	–	2,824,277	2,824,277	4,411
8	Steel plate	cwt.	–	272,222	272,222	–
		$	–	729,927	729,927	–
	Total rolling mill products	$	**1,369,548**	**38,414,967**	**39,985,746**	**4,474,964**
9	Tubes, pipe and fittings	$	152,970	4,007,408	4,160,378	291,770
	Wire—					
10	Barbed fence wire of iron or steel	cwt.	–	482,892	482,892	–
		$	–	2,056,092	2,056,092	–
11	Wire, curved or not, galvanized iron or steel, Nos. 9, 12, 13 gauge	cwt.	–	321,220	321,220	245
		$	–	1,086,257	1,086,257	2,921
12	Wire rope, stranded or twisted wire	$	618,198	327,822	946,020	1,000,585
13	Wire, steel, valued at not less than 2¾c. per lb. for the manufacture of rope	cwt.	28,642	21,439	50,081	54,386
		$	300,611	195,084	495,695	757,257
	Total wire	$	**955,763**	**4,886,006**	**5,843,623**	**2,021,886**
14	Chains, all kinds	$	298,792	709,278	1,008,890	308,571
	Engines and boilers, n.o.p.—					
15	Boilers, steam, and parts of	$	64,155	164,259	228,414	346,824
16	Boilers, n.o.p., and parts of	$	7,839	209,924	217,763	21,250
17	Engines, automobile	No.	–	42,434	42,434	–
		$	–	8,402,351	8,402,351	1,028
18	Engines, internal combustion	No.	157	29,414	29,585	297
		$	40,979	2,969,728	3,004,442	82,673
19	Engines, steam	No.	11	244	255	13
		$	5,929	454,403	460,332	61,214
20	Engine parts and accessories, n.o.p.	$	–	–	–	–
21	Locomotives for railways	No.	–	55	55	–
		$	–	523,732	523,732	–
22	Locomotives for railways, electric	No.	–	9	9	–
		$	1,575	45,452	47,027	–
	Total engines and boilers, n.o.p.	$	**120,477**	**12,874,545**	**12,997,757**	**514,381**
	Farm implements and machinery—					
23	Cream separators and steel bowls for	$	28,300	733,038	796,096	101,557
24	Harvesters, self-binding	No.	–	1,661	1,661	–
		$	–	316,657	316,657	–
25	Mowing machines	No.	–	848	848	–
		$	–	54,463	54,463	–
26	Potato diggers	No.	–	698	698	–
		$	–	53,015	53,015	–
27	Cultivators and weeders and parts of	$	–	78,432	78,432	–
28	Drills, seed	No.	–	4,083	4,083	2
		$	–	233,459	233,459	150

All Countries in quantities and values, by classes entered for consumption, years 1920-1923—con.

1921.		1922.			1923.[1]			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
383,500	383,643	1,307	118,408	119,715	17,895	389,205	407,819	1
1,178,474	1,179,926	5,895	288,304	294,199	40,326	949,904	991,434	
986,338	1,047,069	13,599	447,301	462,868	138,286	926,078	1,064,416	2
5,866,282	6,497,410	65,379	2,008,662	2,081,857	504,805	3,752,046	4,256,952	
419,673	508,733	19,113	254,253	273,366	296,089	422,539	718,670	3
2,584,206	3,566,291	106,809	1,289,743	1,396,552	1,214,135	1,848,082	3,062,444	
2,058,050	2,058,050	–	1,011,685	1,011,685	2,150	1,839,061	1,841,211	4
6,052,793	6,052,793	–	1,990,511	1,990,511	3,011	3,439,559	3,442,570	
562,009	562,009	1,154	326,565	346,886	5,621	345,944	405,716	5
1,630,836	1,630,836	2,231	681,914	726,563	9,542	724,866	828,899	
998,022	999,330	506	213,857	214,450	9,580	591,351	602,659	6
2,871,516	2,883,362	2,122	487,914	490,199	18,802	1,242,904	1,265,709	
2,038,791	2,040,512	–	637,877	637,877	2,142	1,721,165	1,727,915	7
5,962,361	5,966,772	–	1,389,573	1,389,573	4,716	3,519,391	3,531,078	
525,810	525,810	–	89,527	89,527	–	261,425	261,425	8
1,532,521	1,532,521	–	189,212	189,212	–	508,561	508,561	
65,595,709	**70,056,650**	**2,034,490**	**17,959,001**	**20,120,566**	**6,271,886**	**29,965,515**	**36,573,581**	
5,928,346	6,226,128	105,474	2,028,147	2,166,020	182,898	2,450,622	2,656,931	9
418,554	418,554	–	166,033	166,133	112	105,319	105,436	10
1,934,159	1,934,159	–	699,744	700,094	506	376,355	376,885	
366,162	366,407	1	195,152	195,153	–	200,053	210,053	11
1,424,500	1,427,421	13	654,483	654,496	–	599,135	599,135	
332,996	1,333,712	362,760	75,527	440,004	493,047	116,797	609,960	12
52,337	106,723	19,082	6,230	25,312	36,345	12,392	49,111	13
502,413	1,259,670	182,204	60,132	242,336	257,707	95,252	355,185	
5,981,823	**8,018,285**	**668,122**	**2,202,577**	**2,889,392**	**907,592**	**2,071,585**	**3,078,932**	
994,189	1,304,654	99,307	361,648	464,288	143,211	398,200	541,539	14
232,461	579,285	59,262	65,383	124,645	72,354	194,757	267,111	15
260,973	282,223	6,560	152,262	158,822	1,397	126,756	128,153	16
20,087	20,087	1	12,176	12,177	15	26,210	26,225	17
5,387,416	5,388,444	2,087	3,117,839	3,119,926	12,370	4,141,556	4,153,926	
14,330	14,627	162	4,722	4,885	161	6,425	6,587	18
2,175,077	2,257,870	70,161	899,338	970,402	33,089	834,536	871,371	
144	157	5	68	73	10	116	126	19
443,968	505,182	28,695	183,043	211,738	65,472	252,865	318,337	
–	–	–	–	–	68,728	960,148	1,028,886	20
52	52	1	21	22	–	14	14	21
542,643	542,643	4,816	110,320	115,136	–	99,627	99,627	
11	11	–	13	13	–	8	8	22
53,177	53,177	–	53,654	53,654	–	50,924	50,924	
9,292,926	**9,717,427**	**173,385**	**4,663,049**	**4,837,337**	**253,410**	**6,732,447**	**6,989,613**	
721,652	992,404	25,699	201,032	325,755	110	208,620	237,949	23
5,485	5,485	-	1,316	1,316	–	1,606	1,606	24
1,001,575	1,001,575	–	319,807	319,807	–	256,916	256,916	
1,271	1,271	–	522	522	–	410	410	25
79,275	79,275	–	36,143	36,143	–	23,123	23,123	
1,298	1,298	–	259	259	1	862	863	26
101,267	101,267	–	23,618	23,618	95	64,663	64,758	
177,170	177,170	112	62,583	62,695	16	62,790	62,806	27
3,102	3,106	–	790	792	10	1,046	1,056	28
211,345	211,580	–	38,041	38,079	46	39,233	39,279	

[1]Unrevised figures.

13.—Imports of Canada from the United Kingdom, the United States and in the four fiscal

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	United Kingdom.
	V. Iron and its Products—con.					
	Farm implements and machinery—concluded.					
1	Harrows and parts of	$	31	255,357	255,388	216
2	Ploughs and parts of	$	20	1,795,438	1,795,598	12
3	Threshing machine separators	No.	–	911	911	–
		$	–	808,059	808,059	–
4	Threshing machine separators, parts of	$	164	442,505	442,669	135
5	Portable engines with boilers in combination and traction engines for farm purposes	No.	–	422	422	–
		$	15	1,282,825	1,282,840	6,276
6	Traction engines, gas or gasoline, for farm purposes, costing not more than $1,400	No.	–	6,797	6,797	–
		$	–	5,916,926	5,916,926	–
	Total farm implements and machinery	$	**48,581**	**14,494,226**	**14,578,106**	**141,632**
7	Firearms, total	$	27,520	657,073	687,077	43,694
	Hardware and Cutlery.					
	Cutlery—					
8	Knives and forks of steel, plated or not	$	139,859	266,424	407,493	417,256
9	Pen knives, jack-knives and pocket-knives	$	229,942	192,882	459,792	563,927
10	All other cutlery	$	163,829	510,171	694,714	449,824
	Hardware—					
11	Builders', cabinet makers', etc.	$	28,673	657,472	686,200	79,203
12	Locks of all kinds	$	8,127	560,380	579,784	22,511
13	Butts and hinges, n.o.p.	$	1,853	116,300	118,153	1,564
14	Nails, spikes and tacks	$	51	170,103	170,223	2,769
15	Needles and pins	$	215,958	308,126	533,631	342,189
16	Nuts, rivets and bolts, etc.	$	4,382	457,580	461,962	8,127
	Total hardware and cutlery	$	**819,049**	**3,298,079**	**4,210,142**	**1,930,920**
	Machinery (except Agricultural).					
	Household machinery—					
17	Carpet sweepers, hand vacuum and electric vacuum cleaners	No.	–	18,985	18,985	4
		$	–	280,541	280,541	36
18	Sewing machines	No.	2,079	13,875	15,956	2,275
		$	59,572	512,129	571,779	83,890
19	Sewing machines, parts of	$	26,956	494,257	521,213	62,841
20	Washing machines, domestic	No.	–	10,697	10,697	1
		$	–	485,975	485,975	21
21	Clothes wringers and parts	$	–	58,420	58,420	34
	Mining machinery—					
22	Mining, smelting and reducing machinery, etc.	$	20,939	983,058	1,005,272	26,873
23	Ore crushers and rock crushers, stamp mills, etc.	$	14,597	408,118	422,715	59,400
	Office or business machinery—					
24	Adding and calculating machines	No.	–	2,133	2,133	–
		$	–	923,512	923,512	–
25	Cash registers and parts of	$	–	225,994	225,994	–
26	Typewriting machines	No.	3	15,397	15,403	58
		$	108	1,042,345	1,042,531	3,046
	Printing and bookbinding machinery—					
27	Machines specially designed for ruling, etc.	$	1,320	519,975	521,295	8,384
28	Newspaper printing presses	No.	–	81	81	–
		$	–	365,127	365,127	–
29	Printing presses and lithographing presses	$	525	582,103	582,628	7,172
30	Typecasting and typesetting machines, etc.	$	45	899,994	900,039	248
	Other machinery, n.o.p.—					
31	Air compressing machines	$	74,139	249,639	323,778	41,960
32	Coal-handling machines	$	600	102,777	103,377	1,759
33	Cranes and derricks	No.	–	121	121	4
		$	15,626	1,005,199	1,020,825	31,560

All Countries in quantities and values, by classes entered for consumption, years 1920-1923—con.

1921.		1922.			1923.[1]			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
382,554	382,770	168	71,010	71,178	380	92,890	93,270	1
2,526,472	2,526,503	41	554,705	554,846	75	708,694	708,769	2
1,767	1,767	–	1,934	1,934	–	1,932	1,932	3
1,534,572	1,534,572	–	2,187,872	2,187,872	–	1,646,704	1,646,704	
1,056,794	1,056,929	–	550,337	550,337	–	611,452	611,452	4
1,003	1,003	–	109	109	–	82	82	5
2,440,045	2,446,321	3,484	522,175	525,659	–	129,630	129,630	
11,402	11,402	3	1,768	1,771	–	5,426	5,426	6
10,160,949	10,160,949	4,016	1,340,016	1,344,032	–	2,857,428	2,857,428	
24,134,783	**24,458,834**	**68,832**	**7,546,472**	**7,718,032**	**31,041**	**8,352,071**	**8,423,995**	
638,511	726,073	73,819	215,888	313,886	73,973	373,561	469,831	7
301,742	723,916	284,979	118,023	411,460	278,270	127,565	420,628	8
104,297	704,225	380,492	28,485	463,798	189,607	30,096	292,936	9
528,458	1,041,157	236,980	321,523	632,689	179,106	253,122	537,851	10
703,950	784,815	51,323	391,560	442,919	54,667	510,379	566,561	11
676,418	702,142	10,731	320,823	333,293	19,763	344,886	369,547	12
164,078	165,642	3,113	88,341	91,544	2,457	139,925	143,456	13
300,337	303,578	417	232,192	233,659	2,029	109,853	115,782	14
287,730	636,105	216,212	208,303	427,354	213,340	214,676	434,843	15
569,994	578,170	4,222	317,496	321,873	4,403	439,704	444,168	16
3,714,993	**5,781,008**	**1,205,330**	**2,054,671**	**3,425,850**	**963,592**	**2,217,706**	**3,406,483**	
8,161	8,165	9	8,715	8,724	59	9,028	9,142	17
154,725	154,761	174	176,960	177,134	758	121,455	122,910	
8,806	11,081	1,076	4,258	5,334	859	4,724	5,584	18
377,559	461,449	43,123	265,178	308,307	34,442	248,043	282,505	
613,128	675,960	82,723	407,083	489,806	10,131	141,695	151,861	19
9,469	9,470	–	4,860	4,860	3	6,716	6,719	20
615,465	615,486	–	349,207	349,207	249	391,014	391,263	
65,167	65,201	–	10,573	10,573	–	17,729	17,729	21
830,341	862,934	14,698	741,217	756,095	37,008	758,955	795,963	22
729,420	788,820	52,324	557,008	609,332	67,648	756,332	823,980	23
2,606	2,622	–	1,603	1,607	1	2,062	2,068	24
953,253	955,373	–	298,554	300,137	640	397,842	400,331	
322,007	322,007	–	227,431	227,431	45	248,724	248,769	25
14,792	14,853	3	10,421	10,431	65	12,345	12,410	26
998,481	1,001,587	214	630,986	631,356	4,456	728,859	733,315	
777,007	791,029	29,362	268,627	302,248	27,853	529,985	559,372	27
94	94	–	36	36	2	56	59	28
648,377	648,377	–	318,055	318,055	6,955	519,026	530,681	
982,937	991,128	46,252	644,957	694,124	16,390	655,050	675,091	29
1,244,256	1,244,504	2,237	886,371	888,715	728	1,037,783	1,038,511	30
263,219	305,179	23,319	152,207	175,526	18,715	239,647	258,362	31
166,818	168,577	29,433	137,441	166,874	286	114,503	114,789	32
104	108	1	68	69	–	86	86	33
848,157	879,717	4,607	427,905	432,512	–	476,369	476,369	

[1] Unrevised figures.

13.—Imports of Canada from the United Kingdom, the United States and in the four fiscal

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	United Kingdom.
	V. Iron and its Products—concluded.					
	Machinery (except agricultural)—concluded.					
	Other machinery, n.o.p.—concluded.					
1	Cyclometers, pedometers, etc.	$	–	253,190	253,860	152
2	Fire-extinguishing machines, etc.	$	97	159,544	159,641	–
3	Lathes, power	$	12,448	741,330	753,778	22,763
4	Machine drills	$	65,382	975,034	1,040,416	187,915
5	Metal working machinery, n.o.p.	$	–	–	–	–
6	Pumps, power, and parts of	No.	39	5,868	5,907	143
		$	37,361	910,713	948,074	52,586
7	Paper and pulp machinery	$	280,604	1,041,635	1,321,939	690,110
8	Rolling mill machinery	$	–	533,308	533,308	548
9	Saw-mill machines	$	–	200,125	200,125	1,426
10	Textile machinery of a class or kind not made in Canada, and parts of	$	255,366	2,956,400	3,211,766	1,245,989
11	Other machinery composed wholly or in part of iron or steel, and parts of	$	578,050	17,386,182	18,065,134	1,066,066
	Total machinery (except agricultural)	$	**1,443,930**	**35,169,867**	**36,716,791**	**3,597,287**
12	Springs	$	791	738,353	739,152	2,329
13	Stamped and coated products	$	71,033	1,789,388	1,863,692	188,515
14	Tools and hand implements	$	95,466	1,942,036	2,050,286	199,366
	Vehicles, chiefly of iron—					
15	Automobiles, freight	No.	7	2,267	2,274	22
		$	19,945	3,811,139	3,831,084	100,325
16	Automobiles, passenger	No.	3	10,802	10,805	12
		$	8,134	11,196,327	11,204,461	53,781
17	Automobiles, parts of	$	14,034	12,660,789	12,674,823	30,601
	Total vehicles, chiefly of iron	$	**110,934**	**31,786,952**	**31,897,930**	**327,577**
	Other iron and its products—					
18	Cream separators, materials for	$	2,561	641,210	643,852	11,707
19	Drums, cylinders, barrels and tanks	$	1,091	645,357	680,254	27,938
20	Furniture, house, office, etc.	$	1,251	589,137	590,502	15,343
21	Pumps, hand, n.o.p.	No.	22	28,888	28,910	241
		$	444	247,478	247,922	3,411
22	Stoves of all kinds	$	507	410,350	411,060	9,152
23	Valves, n.o.p.	$	19,020	582,379	601,399	35,422
24	Manufactured articles of iron or steel or brass, for equipment of ships or vessels	$	273,604	925,485	1,199,089	343,565
25	Manufactures, articles or wares of iron or steel, n.o.p.	$	287,734	9,810,907	10,112,138	682,369
	Total Iron and its Products	$	**6,637,067**	**178,661,606**	**186,319,876**	**16,698,085**
	VI. Non-ferrous Metals and their Products.					
	Aluminium and its products—					
26	Alumina	cwt.	–	434,572	434,572	–
		$	–	1,465,372	1,465,372	–
27	Aluminium in ingots, blocks, etc.	lb.	201,094	1,017,400	1,218,494	239,948
		$	64,889	297,407	362,296	98,456
28	Aluminium, household hollow-ware, n.o.p.	$	1,180	343,804	345,547	10,446
29	Aluminium, manufactures of, n.o.p.	$	2,695	283,351	295,859	8,954
	Total aluminium and its products	$	**76,467**	**2,660,542**	**2,747,385**	**205,801**
	Brass and its products—					
30	Brass in bars and rods, coils, etc.	cwt.	577	14,380	14,957	4,231
		$	11,637	347,452	359,089	91,811
31	Brass, old and scrap	cwt.	889	17,158	18,590	23,685
		$	18,813	204,110	227,317	390,000
32	Brass in strips, sheets or plates, not polished	cwt.	41	14,703	14,744	2,037
		$	1,388	401,345	402,733	66,574
33	Brass tubing, not polished, etc.	lb.	99,074	664,782	763,856	282,363
		$	38,106	243,883	281,989	103,524
34	Wire cloth, or woven wire of brass	$	77,307	323,537	400,844	81,569
35	Manufactures of brass, n.o.p.	$	89,776	2,059,781	2,163,441	229,982
	Total brass and its products	$	**240,109**	**4,272,628**	**4,531,015**	**979,457**

All Countries in quantities and values, by classes entered for consumption, years 1920-1923—con.

1921.		1922.			1923.[1]			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
178,290	178,442	66	192,051	192,117	37	256,120	256,157	1
151,098	151,098	–	42,548	42,909	141	60,845	60,986	2
542,246	565,337	10,577	116,091	130,182	5,488	152,005	157,634	3
744,169	932,084	26,552	206,758	233,395	21,414	242,789	264,303	4
–	–	27,416	885,135	920,334	50,219	1,181,335	1,280,670	5
6,134	6,280	61	4,090	4,154	163	5,039	5,203	6
1,201,506	1,255,244	73,415	683,209	702,847	15,216	641,801	657,085	
1,711,795	2,487,993	360,190	1,756,634	2,130,341	230,448	987,507	1,231,113	7
646,087	646,635	–	235,134	235,134	720	238,318	239,038	8
320,543	321,969	–	115,233	117,958	254	65,148	65,402	9
4,932,506	6,199,562	675,923	1,853,129	2,636,903	363,716	2,688,637	3,122,014	10
19,704,650	20,977,346	630,329	8,521,363	9,274,698	402,647	7,517,515	7,960,172	11
41,952,851	**45,881,205**	**2,140,046**	**21,645,893**	**24,060,973**	**1,325,589**	**22,553,246**	**24,068,579**	
557,121	559,454	3,210	177,932	181,173	2,508	222,778	225,525	12
1,715,964	1,909,107	77,705	1,420,591	1,511,308	77,378	1,253,944	1,350,685	13
2,315,480	2,562,029	93,270	1,059,952	1,181,696	134,282	1,374,149	1,540,909	14
1,683	1,706	11	790	806	23	1,059	1,082	15
3,476,163	3,578,938	37,411	1,492,290	1,537,765	77,169	1,811,936	1,889,105	
5,891	5,907	74	7,092	7,181	34	11,362	11,402	16
8,339,704	8,399,537	392,578	9,062,184	9,501,362	135,275	11,710,972	11,857,165	
11,729,731	11,760,367	20,694	10,189,926	10,211,791	59,521	14,065,719	14,134,874	17
26,393,390	**26,729,692**	**538,908**	**21,994,154**	**22,588,897**	**344,899**	**28,758,858**	**29,124,904**	
1,105,208	1,116,915	630	436,693	439,067	26	254,480	264,709	18
1,438,627	1,537,362	16,431	465,061	527,718	9,074	563,950	661,191	19
681,796	698,198	3,182	331,762	335,442	6,775	316,725	324,420	20
22,956	23,854	443	15,060	15,558	305	26,880	28,226	21
293,451	298,901	2,369	254,631	257,334	1,971	338,366	343,505	
424,867	437,528	1,836	267,836	272,866	2,669	303,565	310,824	22
880,863	916,285	55,486	435,658	493,075	4,325	394,268	298,618	23
834,408	1,185,022	273,683	142,886	428,547	85,162	292,780	378,492	24
12,555,512	13,293,383	553,711	7,092,294	7,706,497	502,553	7,318,024	7,871,453	25
226,855,725	**245,625,703**	**8,985,993**	**99,938,235**	**110,210,539**	**12,671,433**	**124,371,885**	**138,724,455**	
1,181,313	1,181,313	–	164,561	164,561	986	777,380	778,366	26
1,675,020	1,675,020	–	520,455	520,455	749	1,460,156	1,460,905	
1,409,799	1,650,087	94,499	597,572	692,342	516,144	503,697	1,031,041	27
468,052	566,944	31,897	133,966	165,923	109,403	109,411	221,089	
305,179	324,992	3,857	287,996	334,136	9,203	580,764	636,441	28
330,462	361,227	9,594	246,010	279,243	16,928	299,416	331,737	29
3,013,971	**3,252,236**	**88,086**	**1,320,389**	**1,475,670**	**176,399**	**2,693,229**	**2,946,761**	
17,341	21,573	1,583	6,477	8,060	4,663	12,662	17,325	30
386,788	478,634	23,364	116,270	139,634	61,080	197,100	258,180	
19,869	44,005	2,905	23,655	26,614	7,609	17,722	25,452	31
270,496	663,468	32,681	111,016	144,142	75,769	179,599	256,206	
11,291	13,334	218	13,126	13,344	296	16,729	17,025	32
309,486	376,350	4,846	258,736	263,582	5,582	314,948	320,530	
748,154	1,030,676	32,210	776,545	808,755	71,477	1,476,117	1,547,594	33
263,237	366,884	8,411	182,587	190,998	18,093	358,311	376,404	
381,615	489,788	98,204	181,576	289,821	145,004	151,408	316,885	34
2,473,200	2,735,360	180,654	1,680,100	1,904,052	172,675	1,438,040	1,651,451	35
5,918,311	**6,061,562**	**352,827**	**2,824,078**	**3,234,269**	**483,452**	**3,427,293**	**3,975,838**	

[1]Unrevised figures.

13.—Imports of Canada from the United Kingdom, the United States and in the four fiscal

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	United Kingdom.
	VI. Non-ferrous Metals and their Products— concluded.					
	Copper and its products—					
1	Copper, in bars or rods	cwt.	–	296,783	296,783	183
		$	–	6,037,473	6,037,473	7,127
2	Copper, in blocks, pigs or ingots	lb.	–	4,866,769	4,866,769	–
		$	–	1,021,208	1,021,208	–
3	Copper, in strips, sheets or plates, not polished	cwt.	155	15,425	15,580	129
		$	5,421	445,921	451,342	4,589
4	Copper tubing, in lengths of not less than 6 feet	lb.	36,779	449,561	486,340	158,791
		$	10,396	156,940	167,336	66,264
5	Copper, all other	$	38,038	785,411	890,676	319,660
	Total copper and its products	$	**53,855**	**8,446,953**	**8,568,035**	**397,640**
	Lead and its products—					
6	Lead, old, scrap, pig and blocks	lb.	1,076,067	6,356,075	12,036,032	16,112,823
		$	88,290	372,621	680,779	1,396,777
7	Manufactures of lead, n.o.p.	$	23,556	114,374	172,226	37,724
8	Lead, all other	$	28,945	55,362	84,307	58,731
	Total lead and its products	$	**140,791**	**542,357**	**937,312**	**1,493,232**
	Nickel and its products—					
9	German, Nevada and nickel silver, mfrs. of	$	6,428	409,407	416,203	38,581
10	Nickel plated ware	$	46,126	1,573,248	1,630,047	103,090
	Total nickel and its products	$	**52,554**	**2,213,220**	**2,276,815**	**141,908**
11	Precious metals and their products	$	226,869	5,192,785	5,435,704	665,280
12	Tin and its products	$	2,116,792	931,422	3,284,669	1,703,894
13	Zinc and its products	$	1,579	833,965	835,596	72,978
14	Clocks and watches	$	27,043	2,134,414	3,126,267	59,713
	Electric apparatus—					
15	Electric batteries, storage	No.	181	97,742	97,923	18
		$	4,245	1,470,479	1,474,724	470
16	Electric dynamos and generators	$	4,972	1,039,067	1,044,039	93,766
17	Electric light fixtures and parts of	$	3,846	698,879	732,020	6,377
18	Electric meters	$	37,222	243,252	280,868	24,620
19	Lamps, electric incandescent	No.	–	–	–	52,045
		$	1,479	1,153,407	1,325,297	8,952
20	Motors, electric, generators and dynamos	$	18,342	1,956,639	1,976,703	41,021
21	Telegraph instruments and wireless apparatus	$	9,849	104,185	114,034	40,672
22	Telephone instruments	$	3,523	649,994	653,517	32,804
23	Electric apparatus, n.o.p.	$	88,981	7,311,499	7,435,239	313,344
	Total electric apparatus	$	**175,066**	**15,134,199**	**15,550,354**	**564,673**
24	Printing materials	$	11,665	277,323	291,676	20,859
25	Lamps, side lights, head lights, etc	$	23,112	791,145	823,390	56,967
26	Ores of metals, n.o.p.	cwt.	1,008	535,506	537,518	–
		$	37,767	599,130	663,186	–
	Total Non-ferrous Metals and their Products	$	**3,339,207**	**46,940,714**	**52,176,434**	**6,682,748**
	VII. Non-metallic Minerals and their Products (except chemicals).					
	Clay and clay products—					
27	Bricks, fire, etc	$	87,476	1,572,863	1,660,339	297,602
28	Tableware of china, porcelain, etc	$	1,885,363	113,834	2,528,500	3,531,267
	Total clay and clay products	$	**2,500,680**	**3,307,233**	**6,371,567**	**5,067,492**
	Coal—					
29	Anthracite coal, grate, egg, stove, etc	ton	–	4,890,793	4,890,793	–
		$	–	31,942,384	31,942,384	–
30	Anthracite coal, n.o.p.	ton	–	199,974	199,974	–
		$	–	705,375	705,375	–

All Countries in quantities and values, by classes entered for consumption, years 1920-1923—con.

1921.		1922.			1923.[1]			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
331,707	331,890	30	113,419	113,449	24	274,938	274,962	1
5,716,937	5,724,064	736	1,641,111	1,641,847	540	4,039,846	4,040,386	
7,448,447	7,448,447	–	401,119	401,119	–	2,984,363	2,984,363	2
1,396,327	1,396,327	–	54,138	54,138	–	452,748	452,748	
19,958	20,094	515	16,687	17,202	2,196	22,163	24,359	3
577,535	582,328	11,858	377,893	389,751	50,718	475,684	526,402	
765,517	924,308	22,858	676,331	699,189	73,829	875,625	949,854	4
257,343	323,607	5,762	155,273	161,035	19,471	214,814	234,285	
1,180,722	1,586,200	33,279	479,368	541,288	47,605	995,368	1,047,607	5
9,128,864	**9,612,526**	**51,635**	**2,707,783**	**2,788,059**	**118,334**	**6,178,460**	**6,301,428**	
2,329,589	24,125,900	868,522	387,972	1,491,662	1,561,181	928,752	2,713,870	6
191,472	1,971,392	38,682	24,275	71,392	69,571	60,559	139,800	
135,656	244,005	32,773	67,680	139,552	67,156	81,376	200,311	7
50,120	108,851	17,555	9,161	28,362	37,820	34,349	72,610	8
377,248	**2,324,248**	**89,010**	**101,116**	**239,306**	**174,547**	**176,284**	**412,721**	
484,618	526,741	12,530	213,035	232,976	9,499	188,037	199,376	9
1,713,927	1,845,622	96,285	1,150,967	1,280,286	98,287	1,216,008	1,349,159	10
2,455,351	**2,629,406**	**109,964**	**1,453,788**	**1,604,197**	**124,389**	**1,705,730**	**1,866,828**	
2,036,554	2,753,571	442,215	1,051,458	1,548,876	501,398	1,071,046	1,596,898	11
1,106,391	2,962,644	482,132	720,159	1,324,590	704,046	949,010	1,804,814	12
457,693	584,474	33,267	285,719	403,646	25,890	381,376	493,733	13
2,104,553	3,923,523	30,917	1,215,891	2,129,811	52,780	897,397	1,680,481	14
89,323	89,341	30	24,797	24,827	62	14,957	15,019	15
1,363,986	1,364,456	374	802,359	802,733	133,617	553,473	687,105	
1,227,398	1,323,664	37,713	1,313,419	1,356,725	21,055	1,271,810	1,316,732	16
650,548	668,475	8,401	385,972	409,347	8,783	415,344	448,124	17
352,348	376,968	65,649	171,879	238,954	52,976	174,247	227,223	18
3,372,608	5,047,469	235,301	801,375	3,196,717	254,047	689,783	5,558,042	19
970,163	1,184,504	30,235	173,353	576,319	40,842	131,488	757,952	
2,578,807	2,628,734	219,422	1,530,030	1,753,161	93,796	1,480,135	1,581,547	20
76,581	121,298	78,520	58,726	137,246	90,193	785,165	978,669	21
889,553	922,357	3,145	579,028	585,561	346,763	449,744	796,507	22
7,296,540	7,633,425	111,331	4,310,487	4,437,823	143,109	2,846,645	2,997,085	23
16,918,568	**17,182,859**	**566,954**	**10,010,201**	**11,033,465**	**967,963**	**10,375,454**	**12,109,775**	
301,316	325,934	28,688	269,028	299,226	17,967	275,334	298,125	24
803,333	870,360	25,521	466,433	508,275	34,100	653,255	704,434	25
42,960	43,105	–	139,982	139,982	209	118,999	119,208	26
176,967	176,989	–	1,313,045	1,313,045	2,584	1,113,399	1,115,983	
45,959,914	**55,651,319**	**2,523,868**	**25,343,095**	**29,773,413**	**3,595,638**	**31,791,237**	**37,492,604**	
2,715,216	3,021,600	152,260	931,282	1,083,544	219,146	1,185,954	1,405,100	27
149,974	4,499,183	2,571,626	178,853	3,469,022	2,201,765	111,587	2,946,768	28
4,805,451	**10,781,592**	**3,517,852**	**2,474,815**	**6,778,365**	**3,313,175**	**2,847,785**	**6,873,622**	
4,360,569	4,360,569	110	4,219,235	4,219,569	227,474	2,635,842	2,864,542	
37,576,001	37,576,001	1,355	38,509,678	38,512,833	2,222,671	24,924,110	27,159,924	
478,990	478,990	–	196,686	196,686	20,359	270,712	291,071	
1,482,147	1,482,147	–	487,777	487,777	127,621	801,496	929.	

[1] Unrevised figures.

13.—Imports of Canada from the United Kingdom, the United States and in the four fiscal

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	United Kingdom.
	VII. Non-metallic Minerals and their Products (except chemicals)—concluded.					
	Coal—concluded.					
1	Bituminous coal, slack, etc.	ton	–	2,372,984	2,372,984	399
		$	–	5,174,211	5,174,211	2,000
2	Bituminous coal, round	ton	344	9,179,582	9,179,926	1,082
		$	2,578	22,248,081	22,250,659	6,492
	Total coal	ton	**344**	**16,643,333**	**16,643,677**	**1,481**
		$	**2,578**	**69,070,051**	**69,072,629**	**8,492**
3	Coke	ton	–	381,606	381,606	–
		$	–	2,476,450	2,476,450	–
	Total coal and coal products	$	**8,452**	**62,793,913**	**62,802,365**	**10,446**
	Glass and glassware—					
4	Glass balls, and cut, pressed or moulded crystal glass tableware	$	16,803	649,129	673,004	42,753
5	Glass carboys or demijohns, bottles	$	23,324	855,916	916,402	32,482
6	Plate glass	$	56,725	751,436	1,150,627	396,638
7	Glass, window, common and colourless	$	59,893	1,621,982	1,891,512	194,374
	Total glass and glassware	$	**363,568**	**5,914,363**	**6,926,459**	**1,030,401**
	Petroleum, asphalt and their products—					
8	Asphalt and its products	$	829	465,970	466,799	275
9	Crude petroleum in its natural state	gal.	–	186,483,433	298,540,725	–
		$	–	12,753,761	15,571,813	–
10	Petroleum imported to be refined	gal.	–	99,462,361	100,750,725	–
		$	–	4,557,231	4,708,921	–
11	Coal Oil and kerosene, distilled or refined	gal.	–	6,880,311	7,648,322	–
		$	–	979,312	1,054,487	–
12	Lubricating oils	gal.	17,619	4,833,131	5,068,213	16,476
		$	10,129	1,760,931	1,796,800	9,234
13	Gasoline under ·725 specific gravity	gal.	–	4,979,247	4,982,755	–
		$	–	1,287,016	1,288,566	–
14	Petroleum, products of, n.o.p.	gal.	80	27,701,555	32,746,659	86
		$	98	5,731,766	6,204,840	64
	Total petroleum, asphalt and their products	$	**17,854**	**28,525,941**	**32,095,288**	**25,562**
15	Stone and its products	$	348,670	3,227,728	3,687,702	660,059
	Other non-metallic mineral products—					
16	Diamonds, unset	$	3,012,444	55,490	4,470,846	1,385,614
17	Salt for the use of the sea or gulf fisheries	cwt.	271,930	312,981	1,325,709	245,718
		$	250,504	192,980	586,318	203,370
18	Salt in bulk, n.o.p.	cwt.	7,360	991,696	1,005,056	50,640
		$	3,670	270,632	275,306	36,045
19	Salt, n.o.p., in bags, barrels, etc.	cwt.	441,434	230,386	671,820	451,723
		$	320,585	153,967	474,552	353,981
20	Sulphur and brimstone, crude	lb.	1,120	158,350,597	158,351,717	1,041
		$	177	1,296,281	1,296,458	133
	Total Non-metallic Minerals and their Products	$	**6,945,566**	**198,525,324**	**121,956,176**	**9,118,403**
	VIII. Chemicals and Allied Products.					
21	Acids	$	474,767	533,132	1,053,360	404,358
22	Total drugs, medicine and pharmaceutical preparations	$	1,113,429	1,805,801	3,402,932	1,307,077
23	Total dyeing and tanning materials	$	510,119	4,664,391	5,623,720	818,241
24	Total explosives	$	157,879	375,965	556,836	296,040
25	Total cellulose products	$	19,211	1,101,181	1,122,057	41,725
	Fertilizers—					
26	Soda, nitrate of, or cubic nitre	lb.	11,200	11,219,279	11,231,079	33,892
		$	669	432,666	433,354	2,510
27	Potash, muriate and sulphate of, crude	lb.	1,374,468	2,855,156	6,897,319	589,678
		$	41,438	170,815	285,131	35,970
28	Other fertilizers compounded or manufactured, n.o.p.	$	11,990	734,641	748,382	2,770
	Total fertilizers	$	**54,886**	**1,667,218**	**1,796,752**	**172,056**
29	Total paints, pigments and varnishes	$	222,210	3,541,145	3,821,880	509,128
30	Total soaps	$	92,321	1,424,181	1,534,082	103,883
31	Perfumery, cosmetics and toilet preparations	$	132,543	528,854	1,096,104	94,487
	Inorganic chemicals, n.o.p.—					
32	Sulphate of alumina or alum cake	lb.	51,200	20,742,765	20,793,965	455,530
		$	804	325,846	326,650	9,504
33	Ammonia, nitrate of	lb.	1,102,352	1,481,025	3,066,879	2,707
		$	66,406	82,215	184,396	404

All Countries in quantities and values, by classes entered for consumption, years 1920-1923—con.

1921.		1922.			1923.[1]			No.
United States.	All Countries.	United Kingdom.	United States	All Countries.	United Kingdom.	United States.	All Countries.	
2,359,758	2,360,157	–	2,748,258	2,748,258	233,573	1,941,371	2,174,944	1
11,393,600	11,395,600	–	7,033,899	7,033,899	1,112,227	7,046,127	8,158,354	
13,046,030	13,047,839	5,083	9,998,718	10,003,801	416,758	8,574,331	8,991,993	2
60,831,440	60,844,352	30,620	32,193,596	32,224,216	2,268,306	33,593,823	35,867,082	
20,245,347	**20,247,555**	**5,193**	**17,162,897**	**17,168,314**	**898,164**	**13,422,256**	**14,322,550**	
111,283,188	**111,298,100**	**31,975**	**78,224,959**	**78,258,725**	**5,739,825**	**66,365,556**	**72,114,477**	
548,582	548,582	–	232,174	232,174	2,907	440,976	443,883	3
6,247,931	6,247,931	–	1,673,171	1,673,171	23,371	4,267,603	4,290.974	
117,851,412	**117,868,288**	**100,860**	**80,273,866**	**80,376,526**	**6,273,270**	**71,015,239**	**77,636,045**	
919,585	1,019,744	47,478	431,266	552,859	38,696	516,371	672,363	4
1,495,384	1,584,207	19,424	673,975	738,523	30,007	819,711	895,487	5
499,298	2,144,513	310,742	182,255	1,265,506	558,006	173,930	2,070,568	6
1,390,708	2,872,151	40,249	28,917	624,386	373,150	48,196	1,205,639	7
7,140,830	**11,083,028**	**685,806**	**2,964,336**	**5,392,534**	**1,310,929**	**3,133,528**	**7,071,759**	
694,898	695,854	185	539,501	586,837	6,969	559,724	566,741	8
206,367,754	311,719,057	–	254,948,364	391,292,960	–	261,750,905	397,603,716	9
20,067,907	22,652,012	–	12,960,563	19,610,945	–	13,001,891	20,051,248	
119,054,080	119,054,080	–	51,947,659	51,947,659	–	80,214,293	80,303,615	10
8,257,107	8,257,107	–	2,743,337	2,743,337	–	3,165,388	3,167,330	
16,719,782	16,720,030	700	8,261,791	8,262,611	–	3,426,575	3,431,332	11
2,578,711	2,578,802	157	451,264	451,473	–	296,168	297,595	
5,110,415	5,126,992	14,117	4,925,550	4,940,282	14,159	7,308,740	7,322,916	12
2,510,277	2,519,610	10,439	1,667,740	1,678,915	14,392	2,136,641	2,151,072	
9,400,589	9,400,824	–	19,358,013	22,192,721	–	26,575,137	28,028,341	13
2,615,773	2,615,887	–	4,008,254	4,801,664	–	5,614,671	5,932,923	
41,432,890	51,251,309	2,450	1,230,044	1,232,494	–	1,618,439	1,618,439	14
10,073,839	11,016,740	4,424	259,714	264,138	–	308,113	308,113	
47,878,962	**51,438,351**	**32,224**	**25,988,191**	**34,242,063**	**32,454**	**29,310,478**	**36,715,069**	
4,674,911	5,481,072	299,190	2,620,977	3,135,916	376,220	3,489,510	4,060,806	15
146,109	2,384,150	1,137,654	54,012	3,146,466	604,158	48,960	1,955,495	16
301,133	1,289,617	48,123	423,832	1,037,143	37,662	411,614	1,601,005	17
152,922	508,841	32,515	164,598	291,036	19,725	153,986	325,579	
1,016,187	1,084,595	11,058	876,134	941,968	874	1,296,035	1,311,980	18
324,940	362,756	7,236	274,784	296,656	550	327,185	329,530	
193,293	645,016	509,389	212,872	722,485	675,941	323,874	1,046,092	19
146,621	500,602	335,164	150,135	486,032	392,368	205,952	612,613	
237,787,380	237,809,435	8,290	157,168,316	157,198,236	1,232	245,867,692	246,020,164	20
1,729,093	1,729,808	211	1,271,397	1,272,170	67	1,670,736	1,673,662	
188,459,045	**206,095,113**	**6,324,790**	**118,216,653**	**137,604,140**	**12,508,655**	**114,641,869**	**139,919,012**	
457,489	889,996	96,697	298,921	493,101	87,367	340,622	538,009	21
1,679,047	3,457,913	751,285	1,312,828	2,444,323	897,925	1,095,881	2,354,606	22
4,447,808	6,031,566	253,526	2,898,562	4,093,510	211,090	2,815,218	4,054,130	23
430,178	750,385	26,880	147,142	201,184	45,874	293,953	601,744	24
1,370,429	1,420,374	55,832	994,246	1,076,384	57,637	770,637	892,868	25
49,212,429	52,579,803	5,877	22,832,331	22,838,208	24,140	28,034,588	31,702,506	26
1,634,822	1,737,622	288	581,619	581,907	916	720,549	809,538	
4,210,616	18,314,748	544,110	3,640,223	8,652,794	2,304	4,714,703	24,965,729	27
166,756	840,323	16,423	125,459	236,100	86	83,975	473,017	
1,181,898	1,187,481	18,484	539,664	569,129	4,025	297,881	331,518	28
3,503,303	**4,427,561**	**35,385**	**1,647,301**	**1,881,805**	**5,070**	**1,507,733**	**2,051,975**	
3,513,581	4,251,620	440,894	1,926,621	2,838,466	620,603	2,527,090	3,550,455	29
1,244,677	1,424,446	73,704	1,044,852	1,211,553	91,926	1,093,664	1,280,654	30
470,763	1,202,585	63,577	441,363	955,259	75,668	507,021	871,563	31
20,923,453	21,378,983	385,544	16,047,073	16,432,750	206,926	23,884,973	24,547,299	32
353,842	363,346	6,217	275,352	281,574	2,535	326,379	329,810	
661,757	1,981,806	–	808,090	2,017,078	2,976	506,922	3,819,694	33
34,390	142,999	–	45,375	127,484	222	29,717	262,743	

[1]Unrevised figures.

13.—Imports of Canada from the United Kingdom, the United States and in the four fiscal

No.	Principal articles by classes.		1920. United Kingdom.	1920. United States.	1920. All Countries.	United Kingdom.
	VIII. Chemicals and Allied Products— concluded.					
	Inorganic chemicals, n.o.p.—concluded.					
1	Sal ammoniac	lb.	774,282	455,484	1,229,791	1,127,095
		$	85,199	48,511	133,720	137,901
2	Copper, sulphate of (blue vitriol)	lb.	518,616	1,872,562	2,391,178	573,638
		$	49,436	147,730	197,166	49,492
3	Chloride of lime, etc	lb.	194,450	20,248,575	20,443,025	720,461
		$	5,509	363,228	368,737	47,374
4	Cream of tartar in crystals or argols	lb.	182,503	289,498	796,799	123,632
		$	72,414	138,307	370,375	65,044
5	Borax in bulk	lb.	6,890	3,618,074	3,624,964	65,314
		$	589	278,292	278,881	6,256
6	Soda ash or barilla	lb.	1,030,102	50,986,211	52,016,313	67,982
		$	19,274	1,055,810	1,075,084	1,766
7	Soda, bicarbonate of	lb.	3,371,055	4,102,093	7,473,148	4,218,504
		$	67,542	96,656	164,198	92,649
8	Soda, caustic	lb.	–	6,097,654	6,097,654	11,016
		$	–	224,888	224,888	443
9	Soda, sal	lb.	–	10,619,962	10,619,962	11,200
		$	–	158,059	158,059	170
10	Soda, sulphate of, crude, known as salt cake	lb.	2,478,750	51,441,315	53,920,065	630,198
		$	40,609	369,033	409,642	7,730
11	Soda, silicate of, in crystals or solution	lb.	543,980	21,206,340	21,750,320	987,983
		$	14,763	234,294	249,057	29,035
12	Acid phosphate, not medicinal	lb.	24,239	3,176,843	3,201,082	54,939
		$	2,593	334,660	337,253	4,909
	Total inorganic chemicals, n.o.p.	$	**574,649**	**4,980,989**	**5,761,215**	**867,961**
	Other drugs, dyes and chemicals, n.o.p.—					
13	Camphor	lb.	10,475	49,514	67,130	1,594
		$	25,384	138,894	184,213	4,757
14	Cyanide of potassium	lb.	634,082	269,524	903,606	977,208
		$	157,794	65,559	223,353	240,575
15	Ink, printing	$	15,734	181,913	197,752	20,163
16	Polish or composition, knife or other	$	97,633	273,056	371,165	141,706
	Total Chemicals and Allied Products	$	**4,154,345**	**23,997,657**	**30,042,823**	**6,046,972**
	IX. Miscellaneous Commodities.					
	Amusement and sporting goods—					
17	Cinematograph or moving picture films, positives	$	55,441	1,311,691	1,367,132	29,581
18	Toys, all kinds	$	76,686	1,038,844	1,296,454	367,494
	Total amusement and sporting goods	$	**188,356**	**2,699,548**	**3,107,997**	**532,651**
19	Brushes	$	61,544	474,528	767,183	171,669
20	Packages	$	981,272	800,757	2,124,532	1,763,773
	Household and personal equipment—					
21	Boot, shoe, shirt and stay laces	$	57,907	247,833	370,665	98,318
22	Boots, shoes, slippers, etc	$	71,470	328,941	434,262	206,406
23	Buttons, all kinds	$	22,501	1,099,983	1,329,092	62,839
24	Jewelry	$	50,030	1,120,530	1,242,010	203,392
25	Pocket books, portfolios, etc	$	46,026	652,991	746,245	179,766
26	Spectacle frames, eye-glass frames	$	15	170,410	170,712	420
27	Tobacco pipes, all kinds, etc	$	489,341	486,651	1,204,889	977,221
28	Braids, cords, fringes, tassels	$	53,102	410,745	515,788	123,806
	Total household and personal equipment	$	**977,349**	**5,917,818**	**7,686,722**	**2,213,990**
29	Musical instruments	$	52,436	4,122,624	4,329,093	131,465
30	Scientific and educational equipment	$	153,503	3,029,921	3,282,803	299,259
31	Ships and vessels	$	694,123	5,495,478	6,191,136	599,739
32	Vehicles, chiefly of wood	$	1,339	731,260	732,682	3,599
33	Works of art	$	265,134	314,813	621,520	337,306
34	Pencils, lead	$	13,832	559,804	582,498	68,256
35	Settlers' effects	$	2,057,867	8,016,964	10,181,034	1,700,692
36	Miscellaneous articles imported under special conditions	$	1,862,038	10,466,994	12,864,713	7,506,756
	Total Miscellaneous Commodities	$	**8,323,780**	**50,655,209**	**62,344,780**	**17,061,864**
	Total Imports, Merchandise	$	**136,362,631**	**801,097,318**	**1,064,528,123**	**213,973,265**

All Countries in quantities and values, by classes entered for consumption, years 1920-1923—concluded.

1921.		1922.			1923.[1]			No.
United States.	All Countries.	United Kingdom.	United States.	All Countries.	United Kingdom.	United States.	All Countries.	
299,942	1,438,231	458,331	434,112	899,492	664,069	823,218	1,516,282	1
34,496	173,105	38,698	35,041	75,895	46,878	58,153	110,142	
1,780,164	2,353,802	678,996	833,740	1,512,738	2,123,306	987,506	3,110,935	2
124,307	173,799	39,427	56,651	96,079	105,087	58,763	163,874	
38,729,921	39,450,426	456,022	17,625,186	18,090,172	479,858	37,019,204	37,499,062	3
1,176,515	1,223,901	14,976	384,621	399,860	14,460	578,856	593,316	
236,337	525,583	189,611	163,287	858,104	216,584	154,187	962,008	4
116,403	293,120	52,479	46,287	216,945	36,603	31,725	180,247	
2,604,536	2,669,855	82,751	2,142,430	2,225,181	30,114	2,832,708	2,862,972	5
212,544	218,801	5,739	126,570	132,309	1,712	143,422	145,152	
12,145,267	12,213,249	689,740	6,032,891	6,811,850	343,525	8,167,413	8,510,938	6
314,247	316,013	16,120	110,679	130,972	5,920	127,116	133,036	
3,999,229	8,217,733	261,921	6,007,867	6,269,788	482,020	8,843,852	9,326,072	7
107,655	200,304	9,630	137,811	147,441	15,814	162,579	178,407	
8,155,035	8,313,151	982,778	12,952,191	13,937,519	248,402	11,247,705	11,500,207	8
337,060	344,045	40,853	501,653	542,845	9,331	370,425	380,419	
9,223,189	9,238,263	171,695	9,639,666	9,811,361	26,200	8,879,053	8,905,435	9
185,610	186,098	4,939	196,605	201,544	354	140,449	140,811	
84,302,106	86,052,304	10,056	58,837,971	58,848,027	11,475,712	56,364,393	68,009,505	10
1,019,445	1,043,175	134	707,065	707,199	109,231	578,048	688,149	4
27,539,839	28,797,822	577,216	21,374,106	22,064,162	584,654	25,106,986	25,691,640	11
314,587	346,758	16,610	220,345	238,503	13,571	201,249	214,820	4
2,931,194	2,986,133	83,867	3,395,316	3,479,183	41,596	3,434,152	3,475,748	12
313,280	318,189	8,262	253,923	262,185	3,367	211,620	214,987	
6,019,595	**7,149,704**	**504,894**	**4,596,172**	**5,356,610**	**647,303**	**5,044,653**	**6,107,231**	
57,128	60,984	2,627	50,404	61,667	8,917	58,375	77,880	13
93,329	101,668	2,481	44,962	54,216	7,635	52,204	68,746	
237,881	1,215,089	1,590,759	67,877	1,725,964	1,131,044	553,606	1,754,157	14
59,565	300,140	349,583	16,918	380,607	217,863	104,808	336,467	
196,111	217,546	18,871	144,497	168,337	15,770	189,544	206,372	15
282,986	425,098	77,501	146,261	225,040	110,630	183,667	294,888	16
28,128,104	**37,887,449**	**3,237,117**	**18,143,315**	**24,630,333**	**3,636,013**	**18,347,545**	**25,793,101**	
1,629,424	1,660,892	29,640	1,716,161	1,754,285	21,463	1,524,069	1,549,892	17
1,177,606	1,935,202	161,124	906,045	1,376,084	185,943	915,550	1,445,596	18
3,101,831	**4,245,844**	**302,900**	**2,898,705**	**3,641,610**	**309,616**	**2,693,989**	**3,488,993**	
504,221	1,077,718	104,505	316,319	607,000	114,395	306,797	601,593	19
966,683	3,432,883	1,005,143	630,330	2,050,153	1,149,864	635,996	2,179,599	20
188,246	355,629	19,405	84,704	122,916	20,799	110,527	152,774	21
285,877	524,555	46,035	171,632	243,922	69,297	322,927	428,183	22
832,545	1,213,064	40,057	524,140	690,382	80,668	406,743	683,460	23
811,858	1,174,102	91,057	663,877	880,205	108,155	723,028	986,321	24
509,784	754,326	134,397	450,185	652,796	172,609	468,790	722,127	25
211,102	211,553	113	114,876	115,011	389	185,241	186,150	26
350,946	1,661,023	823,039	133,180	1,322,322	681,984	83,108	1,067,527	27
455,171	792,688	63,591	554,465	819,971	68,601	458,792	830,661	28
4,999,775	**8,542,038**	**1,499,001**	**3,721,279**	**6,259,714**	**1,507,098**	**3,734,339**	**6,455,862**	
3,096,608	3,486,744	74,883	2,040,439	2,353,531	80,117	2,297,117	2,521,457	29
3,211,916	3,765,608	262,074	2,721,148	3,405,251	266,333	2,401,716	2,905,080	30
2,411,450	3,034,247	236,836	598,331	849,958	45,146	1,859,064	2,183,759	31
961,256	964,880	2,918	518,324	521,283	89,508	511,782	602,387	32
435,903	875,350	231,681	186,436	540,280	275,997	172,831	604,643	33
793,686	873,967	48,922	661,400	721,846	47,142	546,455	620,991	34
8,872,413	10,749,819	1,409,020	6,044,233	7,625,534	1,041,121	4,985,266	6,205,085	35
11,532,981	19,518,882	5,195,859	7,565,362	13,511,218	1,181,305	7,807,803	9,500,890	36
50,150,028	**72,688,072**	**11,470,236**	**34,360,031**	**50,485,971**	**7,018,384**	**34,775,037**	**46,136,811**	
356,176,820	**1,240,158,882**	**117,135,343**	**515,958,196**	**747,804,332**	**141,287,671**	**540,917,432**	**802,465,043**	

[1] Unrevised figures.

14.—Imports (Dutiable and Free), and Exports of Canadian and Foreign Produce, by Main Classes, during the fiscal years ended March 31, 1914 and 1919-22.

Classes.	1914.	1919.	1920.	1921.	1922.
IMPORTS.	$	$	$	$	$
Agricultural and Vegetable Products (except chemicals, fibres and wood).					
Dutiable	58,335,155	84,613,246	156,595,248	183,169,503	123,822,535
Free	39,282,487	72,881,819	85,250,899	76,261,607	48,842,988
Total	**97,617,642**	**157,495,065**	**241,846,147**	**259,431,110**	**172,665,523**
Animals and Animal Products (except chemicals and fibres).					
Dutiable	26,249,117	24,554,327	52,933,661	36,407,665	28,670,084
Free	14,843,798	16,950,767	42,165,082	25,314,725	17,975,705
Total	**41,092,915**	**41,505,094**	**95,098,743**	**61,722,390**	**46,645,789**
Fibres, Textiles and Textile Products.					
Dutiable	81,723,548	105,186,945	156,536,643	171,058,642	96,223,007
Free	27,430,313	73,003,296	75,023,234	72,549,700	43,774,130
Total	**109,153,861**	**178,190,241**	**231,559,877**	**243,608,342**	**139,997,137**
Wood, Wood Products and Paper.					
Dutiable	18,349,506	18,610,573	24,837,227	33,969,792	22,308,046
Free	19,047,888	16,789,279	18,346,040	23,479,592	13,483,441
Total	**37,397,394**	**35,399,852**	**43,183,267**	**57,449,384**	**35,791,487**
Iron and its Products.					
Dutiable	120,377,501	136,580,414	155,244,390	202,323,458	98,075,016
Free	23,487,234	55,946,963	31,075,486	43,302,245	12,135,523
Total	**143,864,735**	**192,527,377**	**186,319,876**	**245,625,703**	**110,210,539**
Non-ferrous Metals and their Products					
Dutiable	20,246,345	22,580,060	32,781,310	39,923,514	22,608,912
Free	15,328,059	18,964,348	19,395,124	15,727,805	7,164,501
Total	**35,574,404**	**41,544,408**	**52,176,434**	**55,651,319**	**29,773,413**
Non-metallic Minerals and their Products (except chemicals).					
Dutiable	44,081,914	89,401,495	61,395,487	122,636,171	63,710,543
Free	41,207,043	46,048,167	60,560,689	83,458,942	73,893,597
Total	**85,288,957**	**135,449,662**	**121,956,176**	**206,095,113**	**137,604,140**
Chemicals and Allied Products.					
Dutiable	9,180,745	17,853,351	18,120,605	21,636,986	14,861,012
Free	7,892,179	16,346,663	11,922,218	16,250,463	9,769,321
Total	**17,072,924**	**34,200,014**	**30,042,823**	**37,887,449**	**24,630,333**
Miscellaneous Commodities.					
Dutiable	31,714,913	27,114,247	35,210,594	36,435,675	25,341,589
Free	20,416,253	76,285,745	27,134,186	36,252,397	25,144,382
Total	**52,131,166**	**103,399,992**	**62,344,780**	**72,688,072**	**50,485,971**
Total Imports.					
Dutiable	410,258,744	526,494,658	693,655,165	847,561,406	495,620,744
Free	208,935,254	393,217,047	370,872,958	392,597,476	252,183,588
Total Imports	**619,193,998**	**919,711,705**	**1,064,528,123**	**1,240,158,882**	**747,804,332**
Duty collected (includes War Tax)	**107,180,578**	**158,046,334**	**187,524,182**	**179,667,683**	**121,487,394**

14.—Imports (Dutiable and Free), and Exports of Canadian and Foreign Produce, by Main Classes, during the fiscal years ended March 31, 1914 and 1919-22—concluded.

Classes.	1914.	1919.	1920.	1921.	1922.
EXPORTS.	$	$	$	$	$
Agricultural and Vegetable Products (except chemicals, fibres and wood).					
Canadian Produce	201,189,775	288,286,668	415,820,135	482,140,444	317,578,963
Foreign Produce	13,075,791	25,722,684	6,421,943	1,818,545	2,231,217
Total	**214,265,566**	**314,009,352**	**422,242,078**	**483,958,989**	**319,810,180**
Animals and Animal Products (except chemicals and fibres).					
Canadian Produce	76,591,015	244,990,826	314,017,944	188,359,937	135,798,720
Foreign Produce	1,560,400	9,364,079	6,565,660	1,433,501	1,434,161
Total	**78,151,415**	**254,354,905**	**320,583,604**	**189,793,438**	**137,232,881**
Fibres, Textiles and Textile Products.					
Canadian Produce	1,933,513	28,030,381	34,028,314	18,783,884	4,585,987
Foreign Produce	426,609	1,834,594	3,923,765	2,626,801	1,105,798
Total	**2,360,122**	**29,864,975**	**37,952,079**	**21,410,685**	**5,691,785**
Wood, Wood Products and Paper.					
Canadian Produce	63,201,624	154,569,154	213,913,944	284,561,478	179,925,887
Foreign Produce	926,844	308,949	535,319	551,189	378,344
Total	**64,128,468**	**154,878,103**	**214,449,263**	**285,112,667**	**180,304,231**
Iron and its Products.					
Canadian Produce	15,483,491	81,910,926	81,785,829	76,500,741	28,312,272
Foreign Produce	2,923,929	6,179,760	18,058,937	8,582,412	3,400,751
Total	**18,407,420**	**88,090,686**	**99,844,766**	**85,083,153**	**31,713,023**
Non-ferrous Metals and their Products.					
Canadian Produce	53,304,267	79,260,732	54,976,413	45,939,377	27,885,996
Foreign Produce	500,292	967,146	2,597,839	846,500	822,034
Total	**53,804,559**	**80,227,878**	**57,574,252**	**46,785,877**	**28,708,030**
Non-metallic Minerals and their Products (except chemicals).					
Canadian Produce	9,263,643	26,662,304	30,342,926	40,121,892	22,616,684
Foreign Produce	249,485	3,207,941	842,930	888,775	772,058
Total	**9,513,128**	**29,870,245**	**31,185,856**	**41,010,667**	**23,388,742**
Chemicals and Allied Products.					
Canadian Produce	4,889,913	57,406,349	22,883,685	20,366,279	9,506,170
Foreign Produce	234,848	1,331,193	3,556,274	1,111,680	427,338
Total	**5,124,761**	**58,737,542**	**26,439,959**	**21,477,959**	**9,933,508**
Miscellaneous Commodities.					
Canadian Produce	5,731,198	255,326,466	71,722,908	32,389,669	14,030,001
Foreign Produce	3,950,587	3,405,133	4,663,944	3,405,015	3,114,628
Total	**9,681,785**	**258,731,599**	**76,386,852**	**35,794,684**	**17,144,629**
Total Exports.					
Canadian Produce	431,588,439	1,216,443,806	1,239,492,098	1,189,163,701	740,240,680
Foreign Produce	23,848,785	52,321,479	47,166,611	21,264,418	13,686,329
Total Exports	**455,437,224**	**1,268,765,285**	**1,286,658,709**	**1,210,428,119**	**753,927,009**
Total Trade.					
Imports merchandise	619,193,998	919,711,705	1,064,528,123	1,240,158,882	747,804,332
Exports merchandise	455,437,224	1,268,765,285	1,286,658,709	1,210,428,119	753,927,009
Total Trade	**1,074,631,222**	**2,188,476,990**	**2,351,186,832**	**2,450,587,001**	**1,501,731,341**

15.—External Trade of Canada, by Main Groups and Degrees of Manufacture, according to Origin, Year ended March 31, 1922.

Origins.	Imports for Consumption.			Exports, Domestic.		
	From United Kingdom.	From United States.	Total.	To United Kingdom.	To United States.	Total.
	$	$	$	$	$	$
Articles of Agricultural or Vegetable Origin—						
Raw materials	1,621,981	66,861,697	78,464,013	146,901,497	40,320,999	237,857,046
Partly manufactured articles	89,518	13,947,594	46,546,426	101,968	205,756	519,619
Fully or chiefly manufactured articles	46,169,239	53,761,728	124,080,737	49,671,129	7,601,725	80,816,061
Total	**47,880,738**	**134,571,019**	**249,091,176**	**196,674,594**	**48,128,480**	**319,192,726**
Articles of Animal Origin—						
Raw materials	1,890,159	23,555,812	29,447,960	11,574,237	29,532,103	42,199,323
Partly manufactured articles	3,375,318	6,257,358	11,097,744	1,719,096	3,477,997	5,405,365
Fully or chiefly manufactured articles	27,127,896	19,671,176	61,649,045	51,653,663	3,570,842	60,000,435
Total	**32,393,373**	**49,484,346**	**102,194,749**	**64,946,996**	**36,571,942**	**107,605,123**
Articles of Marine Origin—						
Raw materials	11,929	701,403	1,067,375	314,470	9,004,790	9,359,143
Partly manufactured articles	–	–	–	–	–	–
Fully or chiefly manufactured articles	146,006	557,270	2,109,252	5,278,731	3,758,873	20,252,638
Total	**157,935**	**1,258,673**	**3,176,627**	**5,593,201**	**12,763,663**	**29,611,781**
Articles of Forest Origin—						
Raw materials	16,677	746,765	811,880	46,161	13,085,271	13,637,792
Partly manufactured articles	8,834	7,416,002	7,454,815	13,845,387	57,837,267	79,465,820
Fully or chiefly manufactured articles	2,646,268	24,469,788	28,975,612	1,912,036	77,241,401	87,168,178
Total	**2,671,779**	**32,632,555**	**37,242,307**	**15,803,584**	**148,163,939**	**180,271,790**
Articles of Mineral Origin—						
Raw materials	198,511	99,353,347	106,657,525	4,452,637	16,479,921	26,317,638
Partly manufactured articles	687,098	5,128,941	6,020,164	4,372,753	10,696,163	21,228,641
Fully or chiefly manufactured articles	18,532,346	148,516,350	177,674,468	5,286,129	9,602,289	37,744,279
Total	**19,417,955**	**252,998,638**	**290,352,157**	**14,111,519**	**36,778,373**	**85,290,558**
Articles of Mixed Origin—						
Raw materials	–	–	–	–	–	–
Partly manufactured articles	85,177	624,136	724,702	85,957	487,364	608,119
Fully or chiefly manufactured articles	14,528,386	44,388,829	65,022,614	2,145,824	9,694,882	17,660,583
Total	**14,613,563**	**45,012,965**	**65,747,316**	**2,231,781**	**10,182,246**	**18,268,702**

15.—External Trade of Canada, by Main Groups and Degrees of Manufacture, according to Origin, Year ended March 31, 1922—concluded.

Origins.	Imports for Consumption.			Exports, Domestic.		
	From United Kingdom.	From United States.	Total.	To United Kingdom.	To United States.	Total.
	$	$	$	$	$	$
Recapitulation—						
Raw materials	3,739,257	191,219,024	216,448,753	163,289,002	108,414,084	329,370,942
Partly manufactured articles	4,245,945	33,374,031	71,843,851	20,125,161	72,704,547	107,227,564
Fully or chiefly manufactured articles	109,150,141	291,365,141	459,511,728	115,947,512	111,470,012	303,642,174
Grand Total	**117,135,343**	**515,958,196**	**747,804,332**	**299,361,675**	**292,588,643**	**740,240,680**
NOTE I.						
Approximate value of commodities imported and exported, such as are produced on Canadian farms, or manufactured directly from such farm products, included in Table No. 15.						
Articles of Agricultural or Vegetable Origin—						
Raw materials	590,745	28,641,310	31,068,162	146,874,351	40,077,312	237,563,427
Partly manufactured articles	311	818,491	857,281	100,643	126,327	405,375
Fully or chiefly manufactured articles	454,325	3,390,503	4,483,708	37,638,697	5,647,743	60,771,608
Total	**1,045,381**	**32,850,304**	**36,409,151**	**184,613,691**	**45,851,382**	**298,740,410**
Articles of Animal Origin—						
Raw materials	1,781,112	13,149,713	18,563,540	7,364,959	18,960,106	27,344,942
Partly manufactured articles	364,025	3,991,571	4,516,577	1,705,977	3,464,042	5,364,352
Fully or chiefly manufactured articles	998,842	5,745,102	7,827,664	51,317,813	2,542,311	58,152,013
Total	**3,143,979**	**22,886,386**	**30,907,781**	**60,388,749**	**24,966,459**	**90,861,307**
NOTE II.						
Approximate value of principal Canadian Exports produced wholly or chiefly from imported materials, included in Table No. 15.						
Articles of Agricultural or Vegetable Origin—						
Raw materials	–	–	–	–	66	6,761
Partly manufactured articles	–	–	–	–	74,903	76,269
Fully or chiefly manufactured articles	–	–	–	10,763,558	941,180	16,444,505
Total	–	–	–	**10,763,558**	**1,019,149**	**16,527,535**
Articles of Animal Origin—						
Fully or chiefly manufactured articles	–	–	–	128,707	13,308	209,715

16.—Summary of the Trade of Canada, by Main Groups, Compiled on a Classification According to Purpose, Fiscal Year ended March 31, 1922.

Classes.	Imports for Consumption.			Exports of Canadian Produce.		
	From United Kingdom.	From United States.	Total.	To United Kingdom.	To United States.	Total.
FOODS, BEVERAGES AND SMOKERS' SUPPLIES.	$	$	$	$	$	$
Foods	4,464,330	73,623,614	125,031,880	258,127,342	63,697,753	407,712,175
Animals for food	6,650	257,605	264,255	4,152,621	5,105,973	9,694,367
Breadstuffs	167,918	11,369,589	13,037,024	176,735,266	29,501,299	270,625,264
Grains	32,763	10,479,712	11,955,378	139,535,805	25,597,691	213,321,665
Flour and other milled products	43,109	491,044	554,906	36,207,455	3,870,952	56,162,036
Flour and meal	9,722	477,987	508,462	36,207,455	3,870,952	56,162,036
Other milled products	33,387	13,057	46,444	–	–	–
Bakery products and prepared foods	92,046	398,833	526,740	992,006	32,656	1,141,563
Other farinaceous foods	55,793	778,207	978,761	–	63,625	237,510
Cocoa and chocolate	556,637	1,737,429	3,039,914	–	–	–
Fish	148,428	1,078,834	2,864,165	5,540,898	12,506,656	29,274,472
Fresh or frozen	3,054	542,586	826,757	262,272	8,879,021	9,162,771
Dried, salted, smoked or pickled	80,627	67,084	1,009,160	5,681	2,626,298	9,441,296
Canned or otherwise preserved	64,747	469,164	1,028,248	5,272,945	1,001,337	10,670,405
Fruits	399,277	25,956,424	29,337,673	7,381,140	3,611,370	11,581,829
Fresh	125,030	18,122,082	18,873,673	6,317,957	3,196,093	9,748,522
Dried	143,533	6,961,394	9,151,256	116,907	92,569	537,582
Canned or otherwise preserved	130,714	872,948	1,312,744	946,276	322,708	1,295,725
Meats	303,322	8,395,529	9,002,611	24,345,322	4,899,482	29,826,547
Fresh, chilled or frozen	2,666	4,981,793	5,102,605	926,005	4,674,844	5,811,972
Cured, pickled, preserved or prepared	300,656	3,413,736	3,900,006	23,419,317	224,638	24,014,575
Lard, lard compounds and substitutes	39,581	1,201,478	1,241,067	471,266	241	842,767
Milk and its products	646,774	731,070	2,268,584	27,728,958	5,180,436	36,540,824
Milk and cream, fresh	–	33,055	33,055	–	2,791,002	2,791,002
Milk preparations and products	646,774	698,015	2,235,529	27,728,958	2,389,434	33,749,822
Nuts	136,288	1,896,386	4,534,284	5,717	7,013	12,860
Cocoanuts and their products	29,057	40,895	422,513			
Other nuts, not shelled	25,363	827,179	1,304,739	5,717	7,013	12,860
Other nuts, shelled	81,868	1,028,312	2,807,032			
Oils	31,326	433,344	763,744	–	–	–
Salt	374,915	589,517	1,073,724	–	1,823	7,831
Spices	520,088	433,125	1,219,832	–	–	–
Sugar and sugar products	461,590	9,660,328	44,440,911	9,122,636	289,784	11,621,457
Confectionery	409,161	197,281	725,523	45,736	29,124	440,174
Molasses and syrups	48,179	219,270	1,899,673	470	60,104	66,007
Sugar	283	9,058,292	41,624,696	9,050,710	34,963	10,922,436
Miscellaneous	3,967	185,485	191,019	25,720	165,593	192,840
Vegetables	396,019	3,638,124	4,889,851	232,971	1,999,256	4,030,968
Fresh	142,644	3,162,206	3,531,548	383	1,936,287	3,703,914
Dried or canned	986	377,212	897,856	232,588	62,969	327,054
Pickles and sauces	252,389	98,706	460,447	–	–	–
Vinegar	28,255	10,048	43,189	–	20,406	21,848
Yeast	–	578,487	578,540	–	–	–
Other articles for food	191,469	4,878,090	5,453,751	2,410,547	510,389	3,393.631
Beverages and infusions	23,067,966	1,908,763	37,638,030	201,221	1,051,754	1,928,318
Beverages, alcoholic	19,103,750	1,160,985	24,524,202	197,350	925,987	1,790,249
Brewed	103,051	10,683	114,810	4,080	687,467	849,285
Distilled	18,865,590	1,129,611	23,224,714	193,270	238,343	937,306
Fermented	135,109	20,691	1,184,678	–	177	3,658
Wines, non-sparkling	102,555	16,001	799.591	–	177	3,658
Wines, sparkling	32,554	4,690	385,087			
Beverages, non-alcoholic	39,804	197,708	336,941	3,871	125,393	134,523
Lime and other fruit juices	17,677	131,390	170,404	3,871	66,489	71,194
Mineral and aerated waters	22,127	66,318	166,537	–	58,904	63,329
Infusions	3,924,412	550,070	12,776,887	–	374	3,546
Cocoa	94,570	41,684	152,983	–	–	–
Coffee and chicory	197,337	452,659	3,491,811	–	374	3,546
Tea	3,632,505	55,727	9,132,093	–	–	–
Black	3,582,790	45,213	8,018,304	–	–	–
Green	49,715	10,514	1,113,789	–	–	–

16.—Summary of the Trade of Canada, by Main Groups, Compiled on a Classification According to Purpose, Fiscal Year ended March 31, 1922—continued.

Classes.	Imports for Consumption.			Exports of Canadian Produce.		
	From United Kingdom.	From United States.	Total.	To United Kingdom.	To United States.	Total.
FOODS, BEVERAGES AND SMOKERS' SUPPLIES—concluded.	$	$	$	$	$	$
Smokers' supplies	1,484,811	539,063	2,596,722	1,526	11,565	45,828
Tobacco	656,547	291,234	1,080,434	1,526	11,565	45,828
Other smokers' supplies	828,264	247,829	1,516,288	–	–	–
PERSONAL AND HOUSEHOLD UTILITIES.						
Books, printed matter, stationery and educational supplies	2,180,514	11,430,614	14,447,348	195,480	456,336	1,058,155
Books, pamphlets, printed matter and maps	1,528,174	8,407,149	10,452,130	90,883	343,775	611,597
Books	1,303,306	2,914,970	4,702,345	38,014	121,408	189,244
Charts and maps	32,560	44,707	78,104			
Newspapers	47,911	2,557,838	2,607,718	52,869	222,367	422,353
Printed matter, n.o.p.	144,397	2,889,634	3,063,963			
Stationery	210,765	1,305,766	1,552,991	53,710	19,456	247,870
Educational equipment (except text books)	84,652	660,332	868,182	33,619	28,632	115,221
Works of art	356,923	1,057,367	1,574,045	17,268	64,473	83,467
Clothing	6,651,325	11,060,794	19,503,165	758,617	282,311	1,371,900
Blouses and shirtwaists	9,315	238,652	267,107	–	–	–
Boots and shoes	386,105	1,254,047	1,680,858	295,255	171,076	981,645
Gloves and mitts	328,475	150,714	936,134	3,434	2,525	39,660
Handkerchiefs	889,251	55,805	1,272,137	–	–	
Hats and caps	806,493	1,958,707	2,974,148	6,988	1,759	22,234
Hosiery	1,454,412	925,264	2,404,389	–	–	–
Shawls	112,730	2,200	116,082	–	–	–
Shirts	119,665	251,262	405,244	–	–	–
Underwear	217,606	435,969	670,447	97,331	12,080	202,683
Miscellaneous clothing	2,327,273	5,788,174	8,776,619	355,609	94,871	1,125,678
Household utilities	9,138,470	8,863,514	19,850,489	431,793	297,896	2,263,461
Bedding	664,633	410,831	1,096,745	–	–	–
Cutlery	313,082	237,551	586,805	–	–	–
Floor coverings	1,510,766	337,366	2,103,915	–	335	24,934
Wool carpets	1,106,830	259,147	1,559,610	–	–	–
Other floor coverings	403,936	78,219	544,305	–	335	24,934
Furniture	104,719	1,279,634	1,555,131	41,468	92,686	287,612
Glassware, chinaware and pottery	2,887,760	819,164	4,550,452	690	5,663	121,488
Glassware	47,478	431,266	552,859	–	–	–
Chinaware and pottery	2,840,282	387,898	3,997,593	690	5,663	121,488
Household linen	2,339,645	572,657	3,113,244	–	–	–
Household machinery	126,026	1,209,001	1,335,027	93,736	114,021	738,254
Kitchen equipment	71,525	1,210,575	1,339,740	12,702	46,754	113,115
Soap	72,553	1,042,094	1,207,644	138,882	3,517	227,788
Window curtains and fixtures	311,346	167,327	538,789	–	–	–
Miscellaneous household utilities	736,415	1,577,314	2,422,997	144,315	34,920	750,270
Jewelry, personal ornaments and timepieces	1,426,231	2,153,934	6,790,465	23,901	8,174	80,021
Jewelry and personal ornaments	1,395,314	938,043	4,660,654	23,901	8,174	80,021
Timepieces	30,917	1,215,891	2,129,811	–	–	–
Personal utilities	841,960	1,585,959	3,271,838	–	–	–
Toilet articles	269,754	955,719	1,935,088	–	–	–
Other personal utilities	572,206	630,240	1,336,750	–	–	–
Recreation equipment and supplies	444,573	5,332,505	6,448,578	54,496	2,437,656	2,759,486
Musical instruments and accessories	111,407	2,309,174	2,640,747	30,795	164,011	354,339
Picture machines and accessories	36,536	1,795,472	1,845,392	15,632	2,245,754	2,352,235
Equipment for indoor games	24,653	67,111	98,095	–	–	–
Miscellaneous articles for amusement	271,977	1,160,748	1,864,344	8,069	27,891	52,912

16.—Summary of the Trade of Canada, by Main Groups, Compiled on a Classification According to Purpose, Fiscal Year ended March 31, 1922—con.

Classes.	Imports for Consumption.			Exports of Canadian Produce.		
	From United Kingdom.	From United States.	Total.	To United Kingdom.	To United States.	Total.
ELECTRICAL EQUIPMENT.	$	$	$	$	$	$
Batteries	504	845,898	846,452	4,444	13,697	39,194
Dynamos and motors	257,135	2,843,449	3,109,886	1,314	17,227	55,824
Lighting equipment	40,236	848,381	1,286,143	–	–	–
Transmission equipment	21,355	333,707	358,730	5,360	844,956	1,186,878
Other electric apparatus	270,454	6,398,663	6,689,940	146,973	67,810	391,140
PRODUCERS' EQUIPMENT.						
Abrasives	106,664	967,211	1,083,045	1,289	474,810	485,069
Containers, wrapping and packing materials	1,552,436	4,588,425	6,971,506	429,655	149,029	1,597,772
Bags and sacks	105,391	592,438	739,723	16,840	16,096	97,834
Barrels	562	166,012	168,670	3,896	28,296	48,549
Cordage (except binder twine)	244,086	147,519	404,650	11,135	13,420	79,164
Wrapping paper	20,217	267,329	322,867	388,504	16,540	1,264,654
Miscellaneous containers, etc.	1,182,180	3,415,127	5,335,596	9,280	74,677	107,571
Farm equipment	219,495	9,182,527	10,090,192	404,791	2,344,504	7,243,630
Agricultural implements and machinery	68,832	7,546,609	7,718,169	371,642	583,005	5,345,308
Dairying equipment	25,699	201,032	325,755	618	41,175	192,432
Engines for farm purposes	8,848	2,654,492	2,663,340	–	–	–
Planting and tillage implements	4,806	793,906	798,850	85,678	304,815	2,284,981
Harvesting equipment	7,219	424,042	433,823	114,311	4,851	880,915
Seed separation machinery	432	2,754,324	2,754,756	–	131,741	688,609
Other agricultural implements and machinery	21,704	396,108	418,816	78,831	55,189	512,902
Parts of agricultural implements and machinery	124	322,705	322,829	92,204	45,234	785,469
Animals (except animals for food)	103,345	550,944	669,367	1,210	1,364,598	1,391,120
Animals for improvement of stock	90,462	349,424	452,255	895	362,794	368,786
Other animals	12,883	201,520	217,112	315	1,001,804	1,022,334
Fencing	1,564	732,119	734,049	31,287	282,041	385,818
Harness and horse equipment	22,139	134,447	156,768	155	31,194	34,359
Plants, trees and shrubs	23,615	217,653	811,084	497	83,666	87,025
Miscellaneous farm equipment	–	755	755	–	–	–
Industrial equipment	3,600,642	25,194,425	29,233,038	926,488	957,364	2,878,714
Fisheries equipment	780,312	762,777	1,639,129	–	65,405	65,405
Industrial and trade machinery (except mining, electrical and printing machinery, boilers and engines)	1,868,203	16,696,346	18,831,312	571,534	564,120	1,796,819
Office or business machinery	1,624	1,205,270	1,208,633	164,722	6,887	328,119
Metal-working machinery	64,545	1,443,118	1,519,045	9,792	45,574	100,443
Pulp and paper-making machinery	360,190	1,756,634	2,130,341	–	–	–
Textile and cordage machinery	675,923	1,853,129	2,636,903	–	–	–
Other industrial machinery	765,921	10,438,195	11,336,390	397,020	511,659	1,368,257
Mining and metallurgical equipment	67,022	1,298,225	1,365,427	–	–	–
Printing equipment	106,539	2,430,446	2,545,776	8,558	28,672	41,681
Photographic equipment	56,286	313,895	386,675	141,497	260	153,212
Tools, n.o.p.	93,270	1,059,952	1,181,696	93,584	112,811	336,004
Transmission equipment (except electrical)	158,126	420,612	579,380	–	455	57,545

16.—Summary of the Trade of Canada, by Main Groups, Compiled on a Classification According to Purpose, fiscal year ended March 31, 1922—con.

Classes.	Imports for Consumption.			Exports of Canadian Produce.		
	From United Kingdom.	From United States.	Total.	To United Kingdom.	To United States	Total.
PRODUCERS' EQUIPMENT—concluded.	$	$	$	$	$	$
Industrial equipment—concluded.						
Miscellaneous industrial equipment	470,884	2,212,172	2,703,643	111,315	185,641	428,048
Light, heat and power equipment and supplies (except electrical and transportation)	255,114	92,377,349	94,212,594	2,911,451	9,679,111	16,583,583
Boilers and engines (except for farms)	164,678	1,300,026	1,465,607	121,980	67,099	272,745
Fuel	32,217	89,471,213	91,027,939	2,720,872	7,485,698	13,729,306
Coal	31,975	78,224,950	78,258,725	2,720,872	7,095,769	13,182,440
Fuel oils	–	9,384,623	10,906,918	–	5,337	160,850
Other fuels	242	1,861,640	1,862,296	–	384,592	386,016
Illuminants	5,036	677,054	683,917	4	2,122,739	2,472,890
Other light, heat and power equipment	53,183	929,056	1,035,131	68,595	3,575	108,642
Lubricating oils and greases	18,330	1,955,511	1,974,585	73	70,090	93,225
PRODUCERS' MATERIALS.						
Building and construction materials	1,660,992	17,696,647	21,500,138	7,105,970	47,965,847	62,630,042
Asphalt and its products	185	539,501	586,837	–	–	–
Brick and tile	327,529	1,402,639	1,746,284	1,204	85,853	135,906
Cement, lime and plaster	2,331	96,359	98,791	–	283,097	868,445
Glass for buildings	466,231	273,636	2,103,647	–	–	–
Structural iron	3,116	2,138,738	2,142,017	–	17,892	152,770
Iron piping	83,482	1,292,289	1,406,097	354,639	16,939	1,232,039
Nails	407	188,701	190,158	19,808	56,222	229,404
Lumber and timber	2,103	5,194,582	5,218,512	5,842,960	44,708,120	55,047,157
Paints and painters' materials	440,894	1,926,621	2,838,466	162,903	89,908	423,604
Paints and varnishes	173,854	436,102	627,367	93,002	26,722	271,165
Painters' materials	267,040	1,490,519	2,211,099	69,901	63,186	152,439
Stone, marble and slate	52,674	766,002	919,485	50	27,946	51,740
Railway materials	2,643	3,146,049	3,149,137	–	1,195,599	1,760,995
Miscellaneous construction materials	279,397	731,530	1,100,707	724,406	1,484,271	2,727,982
Farm materials	363,198	12,279,704	13,438,221	756,996	5,383,365	8,151,368
Fertilizers	53,502	1,972,083	2,225,085	7,809	1,636,417	2,220,268
Fodders	2,424	812,098	814,934	301,124	1,751,433	3,270,286
Seeds	265,019	2,073,326	2,932,629	253,885	1,888,494	2,229,686
Miscellaneous farm materials	42,253	7,422,197	7,465,573	194,178	107,021	431,128
Manufacturers' materials	46,230,266	148,369,286	229,298,307	21,239,290	146,789,891	187,365,310
For explosives and ammunition	–	379,815	385,334	–	–	–
For textiles, cordage and clothing	38,392,742	46,466,761	104,455,154	272,308	553,856	1,155,650
Fibres for spinning or cordage manufacture	4,588,245	21,372,194	27,739,481	103,039	301,684	413,329
Yarn for weaving or knitting	4,650,048	2,788,479	7,837,647	–	–	–
Piece goods for clothing	24,906,260	14,242,567	51,566,542	133,181	112,082	349,709
Thread for sewing	859,435	540,801	1,461,553	–	–	–
Buttons and materials for	39,479	433,129	614,553	20	1,204	4,886
Corset materials	25,074	274,156	299,230	–	–	–
Hat materials	184,000	1,728,850	2,534,217	–	–	–
Other textile, clothing and cordage materials	3,140,201	5,086,585	12,401,931	36,068	138,886	387,726
For dyeing and tanning	254,394	2,916,297	4,112,125	28,868	43,828	75,663
For fur and leather goods	690,433	14,384,906	18,454,885	6,012,521	17,308,545	23,638,390
Furs	100,466	6,778,389	7,772,331	4,266,688	10,474,946	14,836,350
Hides	75,302	3,404,338	5,897,312	47,686	3,946,201	4,036,840
Leather	505,232	3,615,452	4,188,038	1,698,147	2,887,398	4,765,200
Other materials	9,433	586,727	597,204	—	—	—

16.—Summary of the Trade of Canada, by Main Groups, Compiled on a Classification According to Purpose, Fiscal Year ended March 31, 1922—concluded.

Classes.	Imports for Consumption.			Exports of Canadian Produce.		
	From United Kingdom.	From United States.	Total.	To United Kingdom.	To United States.	Total.
PRODUCERS' MATERIALS—concluded.	$	$	$	$	$	$
Manufacturers' materials—concluded.						
For smelters and metal refineries	349,583	3,600,496	4,205,469	1,313,754	10,159,022	11,604,531
For foundries	159,501	1,019,677	1,227,977	596,974	1,637,066	6,098,713
For machinery, implements, tools and cutlery	2,682	1,088,219	1,101,806	22,347	205,233	239,555
For electrical goods	8,765	630,242	717,800	–	–	–
For furniture and wood wares	26,309	2,207,067	2,262,960	859,731	146,439	1,550,766
Cabinet woods	7,553	1,304,122	1,320,395	2,003	25,616	66,340
Other materials	18,756	902,945	942,565	857,728	120,823	1,484,426
For musical instruments	65,854	210,668	329,464	–	–	–
For paper-making	64,335	1,595,793	1,669,335	6,609,779	27,282,300	36,736,579
For paper goods, printing and bookbinding	131,680	1,622,446	1,765,893	227,036	59,891,809	64,837,391
For rubber-working industries	147,524	2,846,467	4,036,977	–	62,623	62,623
For vehicles (not including complete parts)	622,731	2,347,035	2,969,766	–	–	–
For vessels	507,518	451,188	981,754	25	5,022	10,258
Other materials for chemical-using industries	576,063	4,864,417	5,858,023	172,958	1,501,929	2,633,723
Other materials for metal-working industries	3,170,587	21,888,656	25,417,287	3,766,438	3,973,031	10,293,629
Other materials for wood-using industries	–	450,077	479,280	706,668	12,246,598	13,557,959
Other manufacturers' materials	1,059,565	39,399,059	48,867,018	649,883	11,772,590	14,869,880
TRANSPORTATION.						
Vehicles	566,787	27,009,583	27,647,712	3,322,150	725,746	16,188,199
Automobiles and parts	452,770	23,862,239	24,370,844	2,219,040	182,481	9,184,257
Other motor vehicles, not for railways	17,307	256,388	273,695	3,210	1,730	7,200
Bicycles and tricycles	45,542	68,039	113,581	492	900	9,704
Railway rolling stock	31,996	1,147,332	1,179,328	–	304,112	3,985,146
Locomotives	6,620	222,005	228,625	–	3,487	1,207,411
Motor cars	3,845	61,875	65,720	–	300,625	2,777,735
Other cars and parts	21,531	863,452	884,983			
Other vehicles	2,918	518,324	521,283	980	163,773	190,240
Rubber tires	16,254	1,157,261	1,188,981	1,098,428	72,750	2,811,652
Vessels	65,899	388,000	467,911	4,888	96,253	3,242,206
Ships and boats	12,596	358,748	384,819	4,888	96,253	3,242,206
Equipment for ships	53,303	29,252	83,092	–	–	–
MEDICAL SUPPLIES.						
Alkaloids and their salts	124,777	99,095	266,751	–	–	–
Biological medicines	23,629	285,184	371,136	–	–	–
Drugs, crude	8,721	160,684	200,196	9,302	147,346	168,904
Medicinal and pharmaceutical preparations	657,332	1,405,280	2,520,095	214,169	19,242	502,664
Oils and gums, chiefly for medicinal use	83,784	100,010	235,443	105	77,950	79,942
Medical, surgical and dental equipment and materials	161,207	1,848,950	2,238,072	–	–	–
ARMS, EXPLOSIVES AND WAR STORES.						
Arms	99,824	220,968	325,014	1,101	1,569	11,495
Military equipment	61,724	159	92,173	–	–	–
Ammunition and explosives	69,729	458,259	550,315	2,223	201,102	264,859
GOODS FOR EXHIBITION.						
Animals	2,925	1,562,939	1,565,864	–	–	–
Other goods	187,210	1,128,914	1,328,048	–	–	–

17.—Value of Total Exports and Imports entered for Consumption, and the Duty collected thereon at certain Ports, during the fiscal years ended March 31, 1922 and 1923.

Ports.	1922.			1923.		
	Total Exports.	Imports for Consumption.	Duty Collected.	Total Exports.	Imports for Consumption.	Duty Collected.
P. E. Island.	$	$	$	$	$	$
All Ports	**282,526**	**1,091,069**	**342,165**	**416,248**	**954,549**	**230,043**
Nova Scotia.						
Halifax	24,893,710	13,476,769	2,199,804	29,584,386	16,956,623	3,725,929
Sydney	4,377,258	1,356,609	164,517	6,630,902	1,697,905	109,283
Other ports	10,581,837	4,066,164	400,502	10,530,099	6,224,087	438,446
Total	**39,852,805**	**18,899,542**	**2,764,823**	**46,745,387**	**23,878,615**	**4,273,658**
New Brunswick.						
McAdam Jct	12,307,451	84,905	14,242	13,185,277	63,934	8,850
St. John	49,749,273	21,369,385	5,602,565	55,127,568	20,687,800	6,500,288
Other ports	4,799,628	5,753,670	1,782,246	8,203,334	6,822,934	1,109,231
Total	**66,856,352**	**27,207,960**	**6,399,053**	**76,516,179**	**27,574,668**	**7,618,369**
Quebec.						
Abercorn	8,393,241	157,564	22,977	9,390,389	164,625	28,749
Athelstan	12,642,742	2,156,687	116,556	18,338,834	1,777,562	190,416
Beebe Jct	7,870,132	1,703,873	95,272	9,905,026	1,765,702	106,892
Coaticook	31,886,542	290,978	11,865	36,112,729	338,095	21,927
Montreal	159,039,309	167,812,273	30,378,080	173,758,813	173,938,311	32,307,801
Quebec	12,984,029	16,629,548	2,267,085	15,382,000	14,332,753	1,793,571
St. Armand	3,597,515	274,507	15,477	4,793,705	171,640	15,380
St. Hyacinthe	–	2,428,333	210,003	–	3,750,020	262,769
St. Johns	31,301,241	6,937,458	476,597	46,193,919	6,917,273	428,280
Sherbrooke	636,840	5,570,378	497,834	1,102,412	5,319,639	467,027
Three Rivers	48,515	4,679,402	659,938	887,104	5,157,371	410,417
Other ports	1,731,622	5,720,157	387,270	3,199,487	8,845,431	438,491
Total	**270,131,728**	**214,361,158**	**35,138,954**	**318,974,418**	**222,478,422**	**36,471,720**
Ontario.						
Brantford	–	4,403,112	463,218	–	4,830,290	490,485
Bridgeburg	34,427,629	4,186,267	660,679	41,916,782	5,222,382	773,180
Chatham	17,991	5,054,235	1,488,266	3,751	5,041,518	1,053,634
Cobourg	1,197,605	2,118,912	283,592	1,489,160	2,152,255	288,583
Cornwall	9,171,454	2,075,460	118,857	8,164,274	2,794,542	128,728
Fort Frances	9,714,220	1,338,157	269,095	12,547,756	1,316,741	230,951
Fort William	64,718,311	12,748,012	783,999	96,848,878	9,354,345	811,264
Galt	–	4,360,004	327,073	–	5,431,561	314,274
Guelph	–	3,227,281	297,716	–	3,992,882	350,839
Hamilton	481,757	26,972,604	3,513,420	673,586	32,479,169	3,666,542
Kitchener	–	6,471,961	714,665	–	7,853,094	735,307
London	–	9,423,634	1,292,780	–	10,453,714	1,390,633
Niagara Falls	45,996,100	6,161,394	950,777	61,255,202	5,897,753	780,767
North Bay	–	3,143,677	445,414	–	3,388,986	464,617
Oshawa	–	7,790,506	2,077,217	–	13,335,992	3,589,298
Ottawa	–	10,111,158	1,426,482	–	10,550,131	1,453,742
Parry Sound	25,993	2,150,916	288,020	34,176	1,329,079	173,197
Peterborough	–	4,038,059	473,976	–	4,427,663	547,542
Port Arthur	49,880,392	6,525,564	447,267	65,719,438	3,983,883	337,297
Prescott	7,479,281	1,981,491	368,141	9,360,605	2,817,961	240,369
St. Catharines	1,989	4,021,360	551,858	80,778	4,612,959	516,734
St. Thomas	980	2,497,070	348,107	14,500	2,490,048	319,898
Sarnia	22,495,405	12,973,903	619,009	28,585,923	13,281,262	704,891
Sault Ste. Marie	10,738,728	5,565,106	561,990	11,862,891	4,697,952	442,738
Stratford	–	2,269,296	260,738	–	2,413,292	280,798
Toronto	513,125	162,017,454	26,615,286	515,155	173,509,098	28,842,404
Welland	708,736	7,252,616	325,580	167,004	10,342,628	605,753
Windsor	29,547,461	26,490,447	5,696,498	37,178,681	34,023,989	7,479,357
Other ports	994,707	20,464,672	2,215,942	2,402,890	24,990,940	3,129,521
Total	**288,132,064**	**367,831,328**	**53,885,662**	**378,821,430**	**407,016,109**	**60,143,373**

17.—Value of Total Exports and Imports entered for Consumption, and the Duty collected thereon at certain Ports, during the fiscal years ended March 31, 1922 and 1923—concluded.

Ports.	1922.			1923.		
	Total Exports.	Imports for Consumption.	Duty Collected.	Total Exports.	Imports for Consumption.	Duty Collected.
	$	$	$	$	$	$
Manitoba.						
Brandon	75,103	1,278,625	177,154	21,670	1,058,620	117,531
Emerson	7,960,774	545,536	32,665	12,502,679	533,050	32,340
Winnipeg	53,311	33,819,932	6,301,829	31,316	36,415,244	6,758,816
Other ports	310,181	954,737	203,732	366,732	871,428	209,806
Total	**8,399,369**	**36,598,830**	**6,715,380**	**12,922,397**	**38,878,342**	**7,718,493**
Saskatchewan.						
North Portal	7,458,404	284,411	37,119	12,351,524	409,082	33,492
Regina	48,156	5,777,877	950,744	240,715	6,156,887	717,981
Saskatoon	–	2,438,984	352,282	–	2,528,943	364,183
Other ports	250,075	1,695,883	253,623	344,928	1,620,824	245,714
Total	**7,756,635**	**10,197,155**	**1,593,768**	**12,937,167**	**10,715,736**	**1,361,370**
Alberta.						
Calgary	–	4,993,575	983,861	–	4,675,301	945,634
Edmonton	–	4,574,112	931,388	–	3,986,966	822,629
Lethbridge	601,915	2,097,136	343,170	637,097	1,417,754	162,774
Other ports	–	259,352	37,708	–	315,665	42,754
Total	**601,915**	**11,924,175**	**2,296,127**	**637,097**	**10,395,686**	**1,973,791**
British Columbia.						
Abbotsford	2,703,457	285,969	40,862	1,948,578	242,837	35,954
Cranbrook	1,868,544	246,909	44,262	1,863,995	402,063	122,238
Fernie	3,663,278	525,091	176,367	2,636,976	961,410	439,414
Nanaimo	5,656,154	438,386	59,995	6,975,683	621,795	84,665
New Westminster	4,451,716	1,272,455	191,581	5,743,648	1,339,165	185,456
Prince Rupert	7,042,112	1,372,881	196,415	9,898,703	1,390,818	257,934
Vancouver	42,777,949	48,235,845	9,992,736	62,230,665	46,965,214	11,267,930
Victoria	2,692,271	5,764,649	1,378,420	4,245,665	6,680,000	1,797,662
Other ports	10,547,009	1,295,982	218,692	1,119,674	1,653,780	323,348
Total	**71,402,490**	**59,438,167**	**12,299,324**	**96,663,587**	**60,257,082**	**14,514,601**
Yukon District.						
All ports	**511,125**	**300,600**	**40,300**	**661,927**	**385,834**	**85,938**
Prepaid postal parcels duty received through P. O. Department	–	41,348	11,839	–	44,201	12,014
Grand Total	**753,927,009**	**747,804,332**	**121,487,394**	**945,295,837**	**802,579,244**	**133,803,370**

NOTE.—The values given in this table of imports and exports at the leading ports of entry indicate that merchandise of the value stated was entered inwards or passed outwards at the ports in question, but do not imply that the imports were for consumption at these ports or that the exports originated there.

18.—Imports of Canada by values entered for consumption from British Empire and Foreign Countries under the General, Preferential, and Treaty Rate Tariffs in the two fiscal years 1921-1922.

Countries.	1921.			1922.		
	General.	Preferential.	Treaty rates.	General.	Preferential.	Treaty rates.
British Empire.	$	$	$	$	$	$
United Kingdom	33,856,392	134,281,317	1,998,197	24,556,468	69,111,080	1,471,426
Africa—British East	57	11,208	–	1,042	6,024	–
British South	2,933	7,508	368	10,137	15,349	–
British West	–	–	–	–	218	–
Australia	333,015	–	3,199	207,446	–	2,425
British East Indies—						
British India	732,184	5,290,958	15	95,580	4,784,531	–
Ceylon	55,076	2,129,254	–	42,881	1,865,244	–
Straits Settlements	13,094	683,016	–	46,426	220,110	–
Other	3,254	671	–	373	–	–
British Guiana	592,910	8,086,061	–	36,774	6,113,425	–
British West Indies—						
Barbados	87,971	2,985,733	–	28,464	1,488,738	12
Jamaica	388,017	3,858,616	24	102,828	1,972,145	46
Trinidad	147,470	44,450	–	101,806	1,279,244	–
Other	29,065	360,050	–	17,388	884,506	6
Fiji	880	1,509,506	–	312	1,965,843	–
Hong Kong	1,958,368	–	52,598	1,261,699	–	2,531
Newfoundland	74,240	–	–	53,373	–	–
New Zealand	388,265	1,676,729	–	223,571	800,448	–
Other British Countries	45,846	16,055	24	58,675	8,522	505
Totals, British Empire	**38,709,037**	**160,941,132**	**2,054,425**	**26,845,243**	**90,515,327**	**1,476,951**
Foreign Countries.						
Austria and Hungary	94,927	–	–	24,720	–	–
Belgium	2,745,858	–	601,821	1,995,616	–	418,468
France	13,168,820	–	2,730,521	7,601,916	–	4,445,246
Germany	533,080	–	–	889,039	–	–
Italy	1,164,079	–	68,963	842,465	–	90,489
Japan	4,564,441	–	6,270,662	2,487,595	–	5,072,067
Netherlands	3,091,057	–	110,207	2,201,309	–	125,494
Norway	127,059	–	339,016	59,771	–	267,658
Spain	1,779,015	–	483,668	1,421,649	–	305,364
Sweden	350,634	–	36,362	103,921	–	23,564
Switzerland	3,609,665	–	9,925,538	2,010,249	–	6,224,086
United States	544,010,980	–	–	312,093,534	–	–
Alaska	208,924	–	–	209,143	–	–
Other Foreign Countries	49,732,905	–	108,610	27,762,947	–	106,913
Totals, Foreign Countries	**625,181,444**	**–**	**20,675,368**	**359,703,874**	**–**	**17,079,349**
Total Dutiable Imports entered for Consumption	**663,890,481**	**160,941,132**	**22,729,793**	**386,549,117**	**90,515,327**	**18,556,300**

19.—Aggregate Trade of Canada by Countries, for the fiscal year ended March 31, 1923.[1]

Countries.	Imports for Consumption.	Exports of Canadian Produce.	Total Trade.
British Empire—	$	$	$
United Kingdom	141,287,671	379,067,445	520,355,116
Aden	11,861	17,876	29,737
Africa—			
British East	4,900	185,642	190,542
British South	185,107	5,583,390	5,768,497
British West—			
Gambia	–	1,289	1,289
Gold Coast	188,601	52,347	240,948
Nigeria	–	22,924	22,924
Sierra Leone	942	6,390	7,332
Other British West Africa	30,271	31,880	62,151
Bermuda	94,799	1,078,149	1,172,948
British East Indies—			
British India	8,140,221	2,027,317	10,167,538
Ceylon	2,981,239	246,752	3,227,991
Straits Settlements	1,252,107	574,273	1,826,380
Other British East Indies	9,094	15,816	24,910
British Guiana	5,669,471	2,082,684	7,752,155
British Honduras	67,213	254,623	321,836
British West Indies—			
Barbados	4,117,016	1,272,173	5,389,189
Jamaica	4,233,195	2,805,012	7,038,207
Trinidad and Tobago	2,111,302	3,439,091	5,550,393
Other British West Indies	1,962,783	2,016,792	3,979,575
Egypt	16,095	756,934	773,029
Gibraltar	–	46,853	46,853
Hong Kong	1,878,869	1,943,808	3,822,677
Malta	1,235	270,676	271,911
Newfoundland	1,400,896	8,523,264	9,924,160
Oceania—			
Australia	1,457,921	18,783,766	20,241,687
Fiji	492,235	214,471	706,706
New Zealand	1,962,541	8,286,262	10,248,803
Other Oceania	–	17,993	17,993
Total British Empire	**179,557,585**	**439,625,892**	**619,183,477**
Foreign Countries—			
Abyssinia	930	–	930
Argentina	3,075,934	4,445,041	7,520,975
Austria	167,820	7,478	175,298
Belgium	4,995,093	12,527,524	17,522,617
Belgian Congo	–	1,005	1,005
Bolivia	–	12,329	12,329
Brazil	1,391,136	1,929,067	3,320,203
Bulgaria	–	213	213
Chile	230,066	313,850	543,916
China	1,460,696	5,125,967	6,586,663
Colombia	364,852	151,044	515,896
Costa Rica	44,104	89,288	133,392
Cuba	11,209,920	5,069,166	16,279,086
Czecho-Slovakia	694,447	79,018	773,465
Denmark	113,133	2,498,342	2,611,475
Greenland, Iceland, etc.	2,275	10,618	12,893
Ecuador	–	33,639	33,639
Esthonia	2,132	433,614	435,746

[1]Unrevised figures.

19.—Aggregate Trade of Canada by Countries, for the fiscal year ended March 31, 1923[1]—concluded.

Countries.	Imports for Consumption.	Exports of Canadian Produce.	Total Trade.
Foreign Countries—concluded.	$	$	$
Finland	11,161	1,675,025	1,686,187
France	12,250,376	14,118,577	26,368,953
French Africa	137,110	95,529	232,639
French Guiana	–	910	910
French Oceania	–	6,597	6,597
French West Indies	–	118,124	118,124
St. Pierre and Miquelon	21,050	599,270	620,320
Germany	2,567,017	9,950,877	12,517,894
Greece	467,765	6,595,589	7,063,354
Guatemala	184,257	86,808	271,065
Hayti	234,551	214,267	448,818
Honduras	–	143,904	143,904
Hungary	18,273	1,297	19,570
Italy	1,598,477	12,073,332	13,671,809
Tripoli	2,274	1,954	4,228
Japan	7,211,015	14,510,133	21,721,148
Korea	50	16,791	16,841
Jugo-Slavia	4,380	137,286	141,666
Lettonia	8,810	174,867	183,677
Liberia	–	400	400
Lithuania	5,873	2,484	8,357
Mexico	3,850,721	3,291,096	7,141,817
Morocco	1,804	32,212	34,016
Netherlands	4,958,091	10,540,085	15,498,176
Dutch East Indies	1,734,990	654,859	2,389,849
Dutch Guiana	493	137,342	137,835
Dutch West Indies	1,552	60,898	62,450
Nicaragua	14,041	31,043	45,084
Norway	560,042	2,216,756	2,776,798
Panama	7,945	224,501	232,446
Paraguay	–	27	27
Persia	46,300	250	46,550
Peru	4,711,644	415,917	5,127,561
Poland and Danzig	14,980	1,039,834	1,054,814
Portugal	124,028	384,848	508,876
Azores and Madeira	66,148	37,515	103,663
Portuguese Africa	18,830	383,562	402,392
Rumania	27,526	16,161	43,687
Russia	850	1,256,640	1,257,490
Salvador	150,410	47,554	197,964
San Domingo	5,956,643	168,222	6,124,865
Siam	1,312	60,234	61,546
Spain	1,696,292	977,061	2,673,353
Canary Islands	6,526	65,017	71,543
Sweden	485,522	2,574,262	3,059,784
Switzerland	7,735,538	519,196	8,254,734
Syria	31,075	66,779	97,854
Turkey	178,286	1,446,184	1,624,470
Ukraine	–	151	150
United States	540,917,432	369,080,218	909,997,650
Alaska	197,834	332,756	530,590
American Virgin Islands	106	2,773	2,879
Hawaii	143,524	51,549	195,073
Philippine Islands	128,183	346,156	474,339
Porto Rico	758	1,078,982	1,079,740
Uruguay	310,160	286,616	596,776
Venezuela	352,895	747,071	1,099,966
Total Foreign Countries	**622,907,458**	**491,825,551**	**1,114,733,009**
Total Imports and Exports	**802,465,043**	**931,451,443**	**1,733,916,486**
Continents—			
Europe	180,043,241	460,679,808	640,723,049
North America	576,770,583	399,803,473	976,574,056
South America	16,114,596	10,780,038	26,894,634
Asia	24,758,829	25,260,855	50,019,684
Oceania	4,184,404	27,706,794	31,891,198
Africa	593,390	7,220,475	7,813,865

[1]Unrevised figures.

20.—Values of Exports of Home Produce from Canada to the British Empire and to Foreign Countries in the five fiscal years 1919-1923.

Countries.	1919.	1920.	1921.	1922.	1923.[3]
	$	$	$	$	$
British Empire—total	**605,159,789**	**561,788,003**	**403,452,219**	**345,835,410**	**439,625,892**
United Kingdom	540,750,977	489,152,637	312,844,871	299,361,675	379,067,445
Australia	14,019,629	11,415,623	18,112,861	10,678,600	18,783,766
New Zealand	6,227,892	6,987,008	11,873,000	4,128,531	8,286,262
Bermuda	1,179,025	1,249,020	1,523,992	989,113	1,078,149
British Africa	12,242,408	9,825,526	15,556,593	4,203,371	5,883,862
British Guiana	2,646,169	3,109,381	3,594,118	2,298,105	2,082,684
British Honduras	51,808	29,350	38,783	150,964	254,623
British India	2,905,426	4,818,053	4,196,350	1,637,145	2,027,317
Egypt and Sudan	924,932	227,652	914,718	494,575	756,934
Straits Settlements	844,244	1,742,554	1,843,744	608,294	574,273
East Indies, all other	82,071	201,652	348,804	95,736	262,568
British West Indies	10,200,582	10,869,276	13,030,225	9,970,481	9,533,068
Fiji Islands	117,962	124,005	170,879	124,390	214,471
Gibraltar	607,637	4,380,054	509,814	195,757	46,853
Hong Kong	995,116	1,343,867	2,000,825	1,411,699	1,943,808
Newfoundland	11,325,235	16,175,443	16,676,728	9,317,639	8,523,264
All other	38,676	136,902	215,914	169,335	306,545
Foreign countries—total	**611,281,017**	**677,704,095**	**785,711,482**	**394,405,270**	**491,825,551**
Alaska	300,112	432,744	482,312	293,184	332,756
Argentina	4,603,130	6,126,457	8,171,980	3,233,423	4,445,041
Austria and Hungary	–	33,168	129,536	–	–
Belgium	950,318	28,463,855	40,252,487	12,359,300	12,527,524
Brazil	4,088,534	2,703,488	2,835,191	2,002,449	1,929,067
Central Am. States[1]	175,699	181,351	473,936	335,517	398,597
Chile	2,321,329	890,960	864,309	290,678	313,850
China	2,856,933	6,665,805	4,906,570	1,900,627	5,125,967
Denmark	42,039	2,938,026	523,485	2,243,181	2,498,342
Dutch East Indies	996,575	1,492,775	2,426,087	951,569	654,859
France	96,103,142	61,108,693	27,428,308	8,208,228	14,118,577
French Africa	72,815	362,637	1,312,859	535,696	95,529
Germany	–	610,528	8,215,237	4,509,547	9,950,877
Greece	16,902	29,588,984	20,834,577	5,247,035	6,595,589
Hawaii	709,246	163,970	132,798	60,560	51,549
Holland	198,985	5,653,218	20,208,418	9,582,924	10,540,085
Italy	13,181,514	16,959,557	57,758,343	15,335,818	12,073,332
Japan	12,245,439	7,732,514	6,414,920	14,831,520	14,510,133
Mexico	568,943	410,825	1,086,197	1,197,597	3,291,096
Norway	1,149,123	4,798,299	5,119,365	3,913,372	2,216,756
Peru	283,022	273,967	614,472	71,683	415,917
Philippines	68,551	292,547	511,741	170,821	346,156
Portugal	367,446	197,385	1,476,894	87,664	384,848
Rumania	–	12,953,605	3,801,584	15,383	16,161
Russia	6,164,658	1,492,041	246,719	2,617,739	1,256,640
St. Pierre and Miquelon	523,488	748,573	590,055	429,190	599,270
Spain	231,095	1,096,053	5,110,725	816,977	977,061
Sweden	19,220	4,449,105	5,528,361	1,220,196	2,574,262
Switzerland	7,665	1,484,416	1,410,777	345,626	519,196
Turkey	621,023	2,336,717	2,791,538	641,422	1,446,184
United States	454,873,170	464,028,183	542,322,967	292,588,643	369,080,218
Uruguay	332,952	689,538	816,503	151,291	286,616
Venezuela	40,441	404,007	278,541	512,499	747,071
West Indies—Cuba	5,035,975	6,329,783	6,573,768	3,974,432	5,069,166
American Virgin Islands[2]	324	2,256	1,131	2,275	2,773
Porto Rico	1,071,805	1,489,667	1,315,716	1,301,979	1,078,982
Santo Domingo	39,663	169,186	247,436	64,497	168,222
Other West Indies	162,946	513,503	185,097	111,515	179,022
All other	859,795	1,435,709	2,310,442	2,249,413	5,008,260

[1]Guatemala, Salvador, Honduras, Nicaragua and Costa Rica.
[2]Formerly Danish West Indies. [3]Unrevised figures.

21.—Values of Imports into Canada of Merchandise entered for Consumption from the British Empire and from Foreign Countries in the five fiscal years 1919-1923.

Countries.	1919.	1920.	1921.	1922.	1923.[3]
	$	$	$	$	$
British Empire—total	**123,671,540**	**174,351,659**	**266,002,688**	**149,109,253**	**179,557,585**
United Kingdom	73,035,118	126,362,631	213,973,562	117,135,343	141,287,671
Australia	4,963,446	1,371,775	791,980	1,079,324	1,457,921
New Zealand	7,855,436	3,494,600	4,219,965	1,783,500	1,962,541
Bermuda	39,056	55,604	76,959	99,886	94,799
British Africa	1,308,016	919,078	262,782	154,050	409,821
British Guiana	6,747,072	7,412,931	9,085,108	6,166,664	5,669,471
British Honduras	298,906	302,043	134,739	79,756	67,213
British India	8,395,290	7,785,254	6,766,751	5,279,857	8,140,221
Straits Settlements	5,081,663	5,269,180	5,185,611	1,454,742	1,252,107
East Indies, all other	1,746,481	3,181,978	2,355,042	2,202,789	2,990,333
British West Indies	8,437,825	12,114,790	14,833,746	8,113,773	12,424,296
Fiji	525,804	714,306	1,510,599	1,966,180	492,235
Hong Kong	2,121,909	3,208,836	3,516,760	2,109,737	1,878,869
Newfoundland	3,098,834	2,146,414	2,886,203	1,392,026	1,400,896
Egypt and Sudan	16,073	10,271	391,326	68,563	16,095
All other	611	1,968	11,555	23,063	13,096
Foreign Countries—total	**796,040,165**	**890,176,464**	**974,156,194**	**598,695,079**	**622,907,458**
Alaska	52,787	415,585	309,463	276,807	197,834
Argentina	1,139,267	3,402,554	2,552,831	2,355,100	3,075,934
Austria and Hungary	–	49,723	96,164	34,637[4]	167,820[4]
Belgium	6,270	911,407	4,693,368	3,845,718	4,995,093
Brazil	1,156,332	1,973,768	2,151,066	1,495,245	1,391,136
Central Am. States[1]	393,477	343,200	376,301	519,142	392,812
Chile	1,059,557	240	97,579	20,471	230,066
China	1,954,466	1,205,229	1,897,346	1,413,527	1,460,696
Denmark	41,252	105,310	119,994	119,315	113,133
Dutch East Indies	3,334,746	3,709,400	993,764	833,101	1,734,990
Dutch Guiana	117,732	87,943	–	–	493
France	3,632,900	10,630,865	19,138,062	13,482,005	12,250,376
French Africa	–	–	2,240	11,573	137,110
Germany	75	44,255	1,547,685	2,041,016	2,567,017
Greece	33	729,830	817,157	1,033,981	467,765
Hawaii	3,467,856	403,687	225,755	114,900	143,524
Holland	495,409	2,266,169	4,237,791	4,002,147	4,958,091
Italy	555,112	999,040	1,745,330	1,387,370	1,598,477
Japan	13,618,122	13,637,287	11,360,821	8,194,681	7,211,015
Mexico	584,047	2,648,915	2,185,399	3,798,202	3,850,721
Norway	25,785	461,848	616,978	426,928	560,042
Peru	2,580,813	5,072,408	4,171,912	6,983,403	4,711,644
Philippines	169,896	47,014	229,907	189,264	128,183
Portugal	111,689	312,912	517,222	222,506	124,028
Russia	83,888	14,496	17,390	1,683	850
St. Pierre and Miquelon	7,092	40,297	56,257	19,026	21,050
Spain	697,643	1,528,298	2,317,179	1,779,408	1,696,292
Sweden	178,855	360,353	555,927	245,295	485,522
Switzerland	1,780,812	7,758,051	14,143,448	8,671,608	7,735,538
Turkey	–	233,478	683,656	852,507	178,286
United States	750,203,024	801,097,318	856,176,820	515,958,196	540,917,432
Uruguay	328,687	322,086	455,105	47,847	310,160
Venezuela	149,155	299,240	451,357	294,305	352,895
West Indies—Cuba	3,040,953	17,585,528	30,743,239	13,042,568	11,209,920
American Virgin Islands[2]	–	–	296	–	106
Porto Rico	2,488	1,910	552	105	758
Santo Domingo	4,728,732	10,675,287	7,578,794	4,065,910	5,956,643
Other West Indies	–	–	5,176	1,505	1,552
All other	341,213	801,533	886,863	914,077	1,572,454

[1] Guatemala, Salvador, Honduras, Nicaragua and Costa Rica. [2] Formerly Danish West Indies.
[3] Unrevised figures. [4] Austria only.

22.—Value of Merchandise imported into and exported from Canada through the United States during the fiscal years ended March 31, 1921-1922.

Countries whence imported and to which exported.	Merchandise imported through United States.		Merchandise exported through United States.	
	1921.	1922.	1921.	1922.
	$	$	$	$
United Kingdom	4,215,939	3,070,315	68,721,906	102,148,220
Australia	69,817	58,793	3,231,020	3,255,880
British Africa	29,920	19,921	1,588,713	678,357
British India	1,282,176	1,176,945	1,595,421	1,147,426
British East Indies (Ceylon)	1,021,464	987,202	74,676	82,787
British Guiana	1,442,071	220,083	86,441	82,040
British Honduras	–	28,569	32,315	2,633
British West Indies	2,590,659	565,344	1,681,099	1,015,990
Egypt and Sudan	500	9,514	62,357	209,730
Gibraltar	–	–	178,582	43,566
Hong Kong	116,737	1,384	80,151	59,709
New Zealand	530,033	33,228	850,555	570,702
Straits Settlements	484,542	232,396	753,714	134,684
Other British Possessions	35,516	7,709	105,737	207,135
Total, British Empire	**11,819,374**	**6,411,403**	**79,042,687**	**109,638,859**
Argentina	735,856	721,073	2,116,194	1,766,708
Belgium	41,318	121,015	18,527,235	4,070,205
Brazil	542,695	641,946	1,176,461	1,045,321
Central American States	58,708	44,387	470,388	305,851
Chile	–	–	805,506	277,885
China	186,216	81,985	327,430	174,069
Cuba	754,940	457,869	2,154,660	1,697,469
Denmark	12,787	47,983	414,719	1,952,566
Dutch East Indies	174,291	41,214	2,031,581	900,174
Dutch Guiana	–	–	39,481	29,128
French West Indies	–	–	67,664	44,969
France	623,294	541,961	10,973,633	2,160,078
French Africa	–	–	120,915	117,046
Germany	60,746	83,976	5,062,975	1,974,721
Greece	194,722	155,574	1,696,895	2,981,044
Hayti	127,053	42,050	93,068	68,350
Holland	219,637	307,369	15,841,607	3,664,725
Italy	536,532	175,853	18,082,516	6,770,418
Japan	1,515,794	33,380	1,604,614	1,044,146
Mexico	73,625	88,865	1,011,866	1,081,046
Norway	8,476	3,268	880,215	624,189
Panama	–	–	280,557	132,365
Peru	793,348	204,407	451,263	51,617
Philippine Islands	–	–	9,778	646
Porto Rico	10,163	–	415,871	247,057
Portugal	101,030	65,944	850,933	2,864
Rumania	–	–	361,441	15,138
Russia	–	–	3,339	281,648
Santo Domingo	5,862,360	819,971	230,370	62,023
Siam	–	–	67,997	43,157
Spain	354,241	366,535	3,470,441	731,565
Sweden	24,744	12,401	2,077,011	796,871
Switzerland	355,511	157,377	1,365,778	129,378
Turkey	252,746	365,838	2,596,228	641,108
U. S. of Colombia	87,239	–	147,655	121,986
Uruguay	5,624	–	193,375	73,303
Venezuela	395,070	47,324	278,447	508,341
Other countries	68,184	140,489	607,167	1,199,180
Total, Foreign Countries	**14,116,204**	**5,686,078**	**96,937,274**	**37,788,555**
Grand Total	**25,935,578**	**12,097,481**	**175,979,961**	**147,427,414**

4.—Canadian-West Indian Trade.

In the 18th century the West Indian islands, small though they were in area, were considered as of the highest value as colonies, largely because they were the chief source of the world's supply of sugar in an age when beet sugar was unknown. The colonizing powers of Europe struggled long and bitterly for them, and in 1763 it was seriously proposed in England to retain the island of Guadeloupe, which had been captured from the French during the Seven Years' war, and hand back Canada to the French.

In the period following the American Revolution, inter-imperial trade was confined to British vessels, and the seamen of Nova Scotia played a prominent part

in the West India trade, and have continued to do so down to our own time. There now exists a well-patronized passenger service from Halifax and St. John to the West Indies, and as far as British Guiana, while the Canadian Government Merchant Marine maintains a freight service to West Indian ports.

At the present time, the British West Indian colonies, together with Bermuda, British Guiana and British Honduras, have a combined area of some 110,000 square miles, and a total population of 2,160,000. Their products, mainly agricultural, are of a tropical character, not competing with our own. Both because of this fact and of our common allegiance, the West Indies and Canada have naturally been led into close commercial alliance. Thus the British preference, established in 1898, was applied to the products of Bermuda, the British West Indies and British Guiana. This continued until June 2, 1913, when a special trade agreement between Canada and certain West Indian colonies became effective, providing that Canada should obtain for a specified list of goods, a rate of four-fifths of the duty imposed on similar goods imported from any foreign country. Canada gave these West Indian colonies a corresponding preference on a list of specified articles, or the British preference, whichever was the lower. This agreement worked so well that a new agreement was made in 1920, under which Canada gave on nearly all goods a remission of 50 p.c. of the duty, while the West Indian colonies gave in return remissions of duty as follows:—Barbadoes, British Guiana, British Honduras and Trinidad, 50 p.c.; Leeward islands and Windward islands, 33⅓ p.c.; Bahamas and Jamaica, 25 p.c. This agreement came into force as regards most of the West Indies on Sept. 1, 1921, and as regards Jamaica on June 1, 1922.

A historical table showing Canadian trade with the British and foreign West Indies is given as Table **23**, and current trend tables of exports and imports are included as Tables **24** and **25**. Especially notable is the great drop in our imports from Cuba following 1921; this was due in the main to the great decline in the price of sugar.

23.—Value of Imports and Exports from and to British and Foreign West Indies, 1901-1923.

Fiscal Year.	Imports from			Exports (domestic and foreign) to		
	British West Indies.	Foreign West Indies.	Total.	British West Indies.	Foreign West Indies.	Total.
	$	$	$	$	$	$
1901	',275,452	605,010	1,880,462	2,300,007	984,306	3,284,313
1902	1,749,675	562,721	2,312,396	2,459,235	1,339,408	3,798,643
1903	2,403,077	579,594	2,982,671	2,701,147	1,471,843	4,172,990
1904	6,375,615	617,015	6,992,630	2,668,505	1,423,542	4,092,047
1905	7,517,880	667,869	8,185,749	3,420,399	1,460,801	4,881,200
1906	8,353,798	712,896	9,066,694	3,242,243	1,831,656	5,073,899
1907[1]	5,730,934	567,719	6,298,653	2,425,946	1,497,240	3,923,186
1908	8,995,059	633,798	9,628,857	3,473,136	2,096,502	5,569,638
1909	9,890,358	495,715	10,386,073	3,290,291	2,006,362	5,296,653
1910	8,776,459	1,584,601	10,361,060	4,181,523	2,384,296	6,565,819
1911	10,268,470	2,171,520	12,439,990	5,213,399	2,501,599	7,714,998
1912	11,081,905	2,791,781	13,873,686	5,170,424	2,925,246	8,095,670
1913	9,867,017	4,658,890	14,525,907	5,040,015	2,327,508	7,367,523
1914	7,689,357	7,372,800	15,062,157	5,557,072	2,554,591	8,111,663
1915	9,678,539	5,112,932	14,791,471	5,423,302	2,095,009	7,518,311
1916	12,400,145	5,991,612	17,391,757	5,798,773	2,319,286	8,118,059
1917	22,510,156	4,509,658	27,019,814	7,422,772	4,085,227	11,507,999
1918	17,704,165	7,905,117	25,609,282	9,746,998	5,129,505	14,876,503
1919	15,522,859	7,980,671	23,503,530	14,238,189	6,503,851	20,742,040
1920	19,885,368	28,525,140	48,410,508	15,395,237	9,456,875	24,852,112
1921	24,130,552	38,478,641	62,609,193	18,327,596	8,565,268	26,892,864
1922	14,460,079	17,150,633	31,610,712	13,630,850	5,668,806	19,299,656
1923[2]	18,255,779	17,403,265	35,659,044	13,149,149	6,877,142	20,026,291

[1]Nine months. [2]Unrevised figures.

24.—Values of Exports (domestic and foreign) to the British and Foreign West Indies, by Countries, during the fiscal years 1921-1923.

Countries.	1921.		1922.		1923.[1]	
	Exports, domestic.	Exports, foreign.	Exports, domestic.	Exports, foreign.	Exports, domestic.	Exports, foreign.
	$	$	$	$	$	$
Bermuda	1,523,992	37,321	989,113	28,364	1,078,372	29,521
British Guiana	3,594,118	13,275	2,298,105	26,349	2,082,684	25,386
British Honduras	38,783	–	150,964	1,311	254,623	1,045
British West Indies—						
Barbados	2,537,087	34,468	1,377,984	17,273	1,271,950	28,133
Jamaica	3,380,991	14,701	2,214,164	32,268	2,805,012	17,323
Trinidad and Tobago	4,949,376	33,541	4,548,535	31,248	3,439,091	42,740
Other B.W. Indies	2,162,771	21,873	1,829,798	85,374	2,016,792	56,477
Total, British West India Colonies	18,187,118	155,179	13,408,663	222,187	12,948,524	200,625
Cuba	6,573,768	636	3,974,432	13,670	5,069,166	25,755
American Virgin Islands[2]	1,131	972	2,275	12	2,773	5
French West Indies	140,589	4,125	66,082	22	118,124	21
Dutch West Indies	44,508	–	45,433	49	60,898	22
Dutch Guiana	135,427	460	127,509	38	137,342	280
French Guiana	1,474	–	841	–	910	–
Hayti	95,135	–	71,967	–	214,267	–
Porto Rico	1,315,716	3,750	1,301,979	–	1,078,982	375
Santo Domingo	247,436	141	64,497	–	168,222	–
Total, Foreign West Indies	8,555,184	10,084	5,655,015	13,791	6,850,684	26,458
Total Exports to the British and Foreign West Indies	**26,742,302**	**165,263**	**19,063,678**	**235,978**	**19,799,208**	**227,083**

[1] Unrevised figures.
[2] Formerly Danish West Indies.

25.—Values of Imports entered for home consumption (dutiable and free) from the British and Foreign West Indies, by Countries, during the fiscal years 1921-1923.

Countries.	1921.		1922.		1923.[1]	
	Imports, dutiable.	Imports, free.	Imports, dutiable.	Imports, free.	Imports, dutiable.	Imports, free.
	$	$	$	$	$	$
Bermuda	46,449	30,510	39,796	60,090	19,587	75,212
British Guiana	8,678,971	406,137	6,150,199	16,465	5,661,090	8,381
British Honduras	5	134,734	171	79,585	404	66,809
British West Indies—						
Barbados	3,073,704	5,241,292	1,517,214	1,477,345	2,004,626	2,112,390
Jamaica	4,246,657	171,405	2,075,019	140,512	4,086,509	146,686
Trinidad and Tobago	191,920	436,976	1,381,050	297,608	1,832,920	278,382
Other B.W. Indies	389,115	1,082,677	901,900	323,125	1,492,236	470,547
Total, British West India Colonies	16,626,821	7,503,731	12,065,349	2,394,730	15,097,372	3,158,407
Cuba	29,971,455	771,784	12,323,872	718,696	10,427,455	782,465
Dutch Guiana	–	–	–	–	411	82
Hayti	156,056	–	42,050	–	234,551	–
Porto Rico	52	500	5	100	106	652
Santo Domingo	7,578,738	56	4,065,870	40	5,955,814	829
Total, Foreign West Indies	37,706,301	772,340	16,431,797	718,836	16,618,337	784,028
Total Imports from the British and Foreign West Indies	**54,333,122**	**8,276,071**	**28,497,146**	**3,113,566**	**31,715,709**	**3,942,435**

[1] Unrevised figures.

5.—Statistics of United Kingdom Import and United States Export Trade in Food Commodities.

About five-sixths of the total value of Canadian trade is transacted with the United Kingdom and the United States. The former country is our greatest customer for our surplus animal and agricultural products, though in the British market Canadian food products meet on equal terms the competition of the world. In Table **26** are given statistics for the five calendar years 1917 to 1921 inclusive, of British imports of animal and agricultural food products by the countries whence they are imported. The figures given in the table make it possible for the enquirer to investigate the rise or decline of the Canadian exports of each of the commodities under consideration in comparison with those of other countries and with the total.

In spite of its enormous domestic demand, the United States is still a large exporter of animal and agricultural food products, and in the markets of the world its products come into competition with our own. In Table **27** statistics of the United States exports of such commodities are furnished for the year ended June 30, 1917, and for the four calendar years 1918 to 1921.

26.—Quantities and Values of Selected Animal and Agricultural Food Products imported into the United Kingdom, by Countries whence imported, during the five calendar years, 1917-1921. [From the British Annual Statement of Trade, 1921.]

(Values converted at par of exchange. £1=$4.86⅔.)

Imports by Countries.		1917.	1918.	1919.	1920.	1921.
Live Cattle[1]—						
United States	No.	–	–	–	–	34,878
	$	–	–	–	–	7,395,752
Canada	No.	–	–	–	–	31,792
	$	–	–	–	–	6,017,663
Other countries	No.	–	–	–	–	4
	$	–	–	–	–	58
Total	No.	–	–	–	–	**66,674**
	$	–	–	–	–	**13,413,473**
Live Sheep[1]—						
United States	No.	–	–	–	–	8,648
	$	–	–	–	–	188,457
Canada	No.	–	–	–	–	2,056
	$	–	–	–	–	45,751
Total	No.	–	–	–	–	**10,704**
	$	–	–	–	–	**234,208**
Butter—						
Russia	cwt.	–	–	6,954	19,308	65,211
	$	–	–	426,359	1,365,849	3,458,521
Sweden	cwt.	–	–	–	4	808
	$	–	–	–	214	40,014
Denmark	cwt.	622,160	40,327	290,291	817,268	1,250,176
	$	34,225,320	3,753,617	19,212,797	57,245,846	73,411,744
Netherlands	cwt.	75,880	9,885	1,641	102,567	63,065
	$	3,713,062	799,676	101,285	7,706,279	3,621,992
France	cwt.	45,707	4,770	2	8,734	542
	$	2,434,029	360,080	78	586,136	30,095
United States	cwt.	10,534	196,593	216,495	37,261	1,888
	$	516,275	11,856,490	13,368,285	2,711,473	54,312
Argentina	cwt.	142,300	313,143	265,675	138,862	401,354
	$	6,851,517	18,478,977	16,275,170	9,921,157	24,416,232
Australia	cwt.	529,809	540,072	417,371	227,542	964,226
	$	25,371,866	32,716,756	25,555,723	15,974,230	55,867,513
New Zealand	cwt.	310,925	372,572	318,872	275,406	709,381
	$	15,551,958	22,382,608	19,030,769	18,630,963	41,337,773
Canada	cwt.	33,057	61,971	33,337	32,140	43,138
	$	1,669,685	3,767,530	2,032,261	2,322,617	2,578,633
Other Countries	cwt.	36,144	39,325	9,566	43,111	24,187
	$	1,625,385	2,096,990	622,150	2,859,809	1,237,580
Total	cwt.	**1,806,516**	**1,578,558**	**1,560,204**	**1,702,203**	**3,523,976**
	$	**91,959,107**	**96,212,724**	**96,624,877**	**119,324,573**	**206,054,409**

[1] For food.

NOTE.—Throughout this table the cwt. is the long cwt. of 112 lb., and for eggs the great hundred=120.

26.—Quantities and Values of Selected Animal and Agricultural Food Products imported into the United Kingdom, by Countries whence imported, during the five calendar years, 1917-1921—con.

(Values converted at par of exchange. £1=$4.86⅔.)

Imports by Countries.		1917.	1918.	1919.	1920.	1921.
Cheese—						
Netherlands	cwt.	244,865	87,896	79,217	112,196	128,032
	$	7,543,304	3,024,614	3,252,340	3,524,411	3,742,253
France	cwt.	1,595	69	1,279	9,324	4,406
	$	52,638	4,915	45,455	373,303	156,473
Switzerland	cwt.	569	–	190	14,907	10,209
	$	26,309	–	22,319	526,384	514,056
Italy	cwt.	371	–	180	951	7,226
	$	22,543	–	17,174	93,547	301,334
United States	cwt.	267,138	472,328	16,169	73,344	49,063
	$	9,225,954	16,100,184	608,952	2,525,692	1,497,906
New Zealand	cwt.	609,700	610,655	1,239,553	1,260,642	1,302,490
	$	19,469,903	18,735,182	41,148,635	45,162,185	42,472,612
Australia	cwt.	63,349	47,258	112,736	63,279	83,622
	$	2,347,325	1,389,555	4,043,884	2,505,958	2,442,639
Canada	cwt.	1,757,949	1,125,668	647,212	1,129,758	1,195,661
	$	56,010,564	37,451,000	23,821,058	42,897,379	32,445,307
Other countries	cwt.	530	13,229	21,714	85,859	36,756
	$	18,425	703,058	870,534	2,809,678	1,333,822
Total	cwt.	**2,946,066**	**2,357,103**	**2,118,250**	**2,750,260**	**2,817,465**
	$	**94,716,965**	**77,408,508**	**73,830,351**	**109,418,537**	**84,906,402**
Eggs—						
Latvia	gt. hunds.	–	–	–	–	432,491
	$	–	–	–	–	1,894,155
Sweden	gt. hunds.	–	–	–	45,461	190,786
	$	–	–	–	401,592	821,586
Denmark	gt. hunds.	1,654,900	1,170,535	1,638,067	3,939,437	4,735,275
	$	10,951,066	12,614,560	13,510,431	34,224,139	26,549,482
Netherlands	gt. hunds.	202,177	–	620	48,474	505,493
	$	1,050,675	–	5,743	358,906	2,792,513
France	gt. hunds.	–	–	6,584	15,160	53,546
	$	–	–	34,383	120,869	276,392
China	gt. hunds.	320,539	–	272,585	731,334	468,233
	$	1,242,279	–	1,682,344	4,013,053	2,250,308
Egypt	gt. hunds.	1,602,671	729,807	758,728	556,740	642,000
	$	4,941,321	3,480,494	4,529,280	2,858,923	2,473,513
Serb-Croat-Slovene State	gt. hunds.	–	–	–	–	648,342
	$	–	–	–	–	2,916,749
Canada	gt. hunds.	672,761	388,985	1,476,962	807,281	684,480
	$	4,007,130	3,245,405	10,854,720	7,197,474	3,835,269
United States	gt. hunds.	349,339	337,345	1,408,606	331,185	221,889
	$	1,964,639	3,003,882	10,731,448	2,692,294	1,232,619
Other countries	gt. hunds.	120,015	29,743	82,243	576,253	1,974,969
	$	503,272	147,684	569,838	4,366,684	10,417,110
Total	gt. hunds.	**4,922,402**	**2,656,415**	**5,644,395**	**7,060,508**	**10,557,501**
	$	**24,660,382**	**22,492,025**	**41,918,187**	**56,304,111**	**55,459,696**
Bacon—						
China	cwt.	63,037	75,818	258,271	28,265	14,535
	$	1,844,389	2,948,942	11,037,327	1,191,477	349,329
Sweden	cwt.	–	–	–	4,515	154,595
	$	–	–	–	184,734	6,535,422
Denmark	cwt.	1,123,155	21,491	6,644	704,075	1,849,885
	$	37,803,282	923,951	320,241	35,606,334	82,392,686
Netherlands	cwt.	144,116	–	–	4,152	258,741
	$	4,302,216	–	–	185,060	11,796,532
United States	cwt.	3,467,085	8,645,318	5,893,514	3,362,264	2,509,379
	$	102,500,147	362,745,600	253,625,769	143,343,284	79,165,420
Canada	cwt.	1,767,085	1,719,736	2,094,248	1,493,008	844,024
	$	54,956,901	72,797,298	91,886,244	63,893,182	30,256,456
Other countries	cwt.	3,096	11,099	28,521	15,351	46,429
	$	118,600	441,305	1,277,758	718,611	1,341,424
Total	cwt.	**6,567,574**	**10,473,562**	**8,281,198**	**5,611,630**	**5,677,588**
	$	**201,524,535**	**439,857,096**	**358,147,339**	**245,121,682**	**211,837,269**

26.—Quantities and Values of Selected Animal and Agricultural Food Products imported into the United Kingdom, by Countries whence imported, during the five calendar years, 1917-1921—con.

(Values converted at par of exchange. £1=$4.86⅔.)

Imports by Countries.		1917.	1918.	1919.	1920.	1921.
Hams—						
United States	cwt.	1,126,736	1,419,008	1,718,363	283,591	1,020,718
	$	34,120,127	57,928,814	74,286,630	12,646,652	36,365,996
Canada	cwt.	50,070	110,683	74,762	25,776	93,906
	$	1,593,731	4,508,232	3,179,997	1,153,760	3,194,884
Other countries	cwt.	3,360	25,252	20,029	14,984	12,663
	$	106,767	968,934	836,565	662,256	428,242
Total	cwt.	**1,180,166**	**1,554,943**	**1,813,154**	**324,351**	**1,127,287**
	$	**35,821,625**	**63,405,980**	**78,303,192**	**14,462,668**	**39,989,122**
Lard—						
United States	cwt.	1,379,498	2,586,187	1,833,685	1,149,600	1,990,380
	$	40,278,222	96,396,364	77,517,561	50,512,890	44,558,894
Canada	cwt.	23,784	89,493	79,292	125,260	100,480
	$	654,878	3,355,411	3,355,046	5,354,628	1,852,891
Brazil	cwt.	10,016	25,288	38,416	1,840	53,120
	$	334,180	881,869	1,456,652	53,144	1,544,325
China	cwt.	63,961	30,946	158,354	143,500	82,200
	$	1,661,850	977,343	5,887,085	5,368,430	1,781,351
Other countries	cwt.	22,935	28,490	68,583	26,300	49,740
	$	590,331	898,186	2,659,531	970,802	1,184,614
Total	cwt.	**1,500,194**	**2,760,404**	**2,178,330**	**1,446,500**	**2,275,920**
	$	**43,519,461**	**102,509,173**	**90,875,875**	**62,259,894**	**50,922,075**
Wheat—						
United States	cwt.	54,208,300	24,757,610	31,769,300	45,422,300	36,065,002
	$	242,417,300	110,348,133	150,386,881	339,878,783	153,412,206
Japan	cwt.	–	–	–	2,420,500	1,299,600
	$	–	–	–	17,531,485	6,101,014
China	cwt.	–	–	–	330,000	538,400
	$	–	–	–	2,535,742	2,583,796
Argentina	cwt.	6,700,600	14,389,400	6,819,100	30,830,800	4,186,460
	$	30,020,296	64,501,816	30,921,175	186,708,148	17,726,629
British India	cwt.	2,744,700	621,400	100	20,000	2,660,200
	$	12,361,499	2,882,132	180	170,333	13,465,453
Egypt	cwt.	–	–	–	–	617,800
	$	–	–	–	–	2,643,379
Chile	cwt.	–	–	–	–	323,000
	$	–	–	–	–	1,340,095
Australia	cwt.	9,243,700	2,013,700	14,952,700	19,966,100	20,108,715
	$	43,414,244	9,222,610	6,301,968	90,695,044	86,544,532
Canada	cwt.	18,408,300	15,968,700	17,864,900	10,189,400	14,589,320
	$	82,488,735	70,565,577	85,212,043	75,831,651	59,453,988
Other countries	cwt.	129,406	196,800	36,900	149,226	90,297
	$	563,369	889,767	167,297	848,451	345,105
Total	cwt.	**91,435,006**	**57,947,610**	**71,443,000**	**109,328,326**	**80,478,794**
	$	**411,265,443**	**258,410,035**	**332,989,544**	**714,199,637**	**343,616,197**
Barley—						
Australia	cwt.	–	–	7,200	230,000	486,292
	$	–	–	37,858	1,454,681	2,107,272
Tunis	cwt.	–	–	290,500	–	581,200
	$	–	–	1,638,169	–	1,477,866
United States	cwt.	5,643,900	4,070,300	10,793,200	6,227,400	8,587,000
	$	27,974,292	21,354,461	57,764,476	36,765,166	29,949,350
Chile	cwt.	75,200	–	351,300	867,700	769,960
	$	357,685	–	1,904,935	5,435,444	2,471,474
Argentina	cwt.	397,000	–	221,500	419,000	57,600
	$	1,724,401	–	1,090,971	2,054,112	137,610
British India	cwt.	1,390,700	–	5,100	–	–
	$	6,149,622	–	24,625	–	–
Canada	cwt.	1,482,700	952,000	4,830,200	2,691,200	3,119,200
	$	6,818,463	5,036,786	23,525,150	14,067,990	9,101,046
Rumania	cwt.	–	–	–	1,442,800	982,500
	$	–	–	–	6,570,078	2,730,171
Morocco	cwt.	–	–	–	260,800	446,600
	$	–	–	–	1,349,892	1,130,678
Other countries	cwt.	149,000	2,900	144,900	528,800	882,300
	$	619,098	15,344	818,880	2,665,702	2,137,521
Total	cwt.	**9,138,500**	**5,025,200**	**16,643,900**	**12,667,700**	**15,812,652**
	$	**43,643,561**	**26,406,591**	**86,805,064**	**70,363,065**	**51,242,988**

26.—Quantities and Values of Selected Animal and Agricultural Food Products imported into the United Kingdom, by Countries whence imported, during the five calendar years, 1917-1921—con.

(Values converted at par of exchange. £1=$4.86⅔.)

Imports by Countries.		1917.	1918.	1919.	1920.	1921.
Oats—						
United States	cwt.	8,114,700	6,009,400	2,956,421	194,600	434,800
	$	36,200,948	30,434,610	14,516,099	941,792	1,220,745
Chile	cwt.	1,206,800	39,200	528,000	27,900	484,200
	$	5,602,638	154,517	2,793,102	117,422	1,268,778
Argentina	cwt.	924,600	1,524,270	1,069,700	4,676,200	3,231,540
	$	3,094,178	8,018,607	9,939,407	20,995,131	7,856,260
Canada	cwt.	2,219,500	3,409,700	940,500	697,500	3,591,800
	$	10,760,433	17,500,295	4,397,715	3,227,884	9,254,186
Other countries	cwt.	156,100	–	216,800	533,200	614,496
	$	589,500	–	1,076,935	2,247,281	1,827,088
Total	cwt.	**12,621,700**	**10,982,570**	**6,711,421**	**6,101,600**	**8,356,836**
	$	**56,247,697**	**56,108,029**	**32,723,258**	**27,412,576**	**21,427,057**
Peas, whole—						
Canada	cwt.	11,700	50,430	37,756	12,620	10,948
	$	92,540	803,978	429,172	202,935	150,613
Netherlands	cwt.	950	240	6,445	41,306	337,937
	$	7,373	5,801	82,169	362,650	2,395,587
Japan	cwt.	507,850	687,544	541,140	191,380	296,160
	$	6,177,976	10,829,078	6,825,690	1,543,161	2,042,443
British India	cwt.	448,070	893,380	12,960	100	–
	$	2,643,681	7,338,846	170,528	1,587	–
New Zealand	cwt.	44,340	48,940	171,580	86,630	94,877
	$	348,453	493,859	1,645,386	858,621	692,736
United States	cwt.	101,870	409,820	83,280	36,384	62,414
	$	1,249,482	5,880,350	1,253,639	751,618	518,193
Australia	cwt.	47,560	41,526	81,350	38,180	103,976
	$	521,634	506,868	772,472	315,228	564,188
China	cwt.	57,360	15,220	155,900	114,420	280,290
	$	315,151	86,242	940,673	689,782	988,901
Other countries	cwt.	56,050	28,137	42,980	50,700	84,714
	$	601,287	310,459	431,088	339,353	397,398
Total	cwt.	**1,275,750**	**2,175,237**	**1,133,391**	**571,720**	**1,271,318**
	$	**11,957,577**	**26,256,795**	**12,550,817**	**5,064,935**	**7,750,059**
Corn—						
Brazil	cwt.	295,618	163,500	89,800	64,000	175,400
	$	1,306,121	980,731	427,605	242,842	426,763
United States	cwt.	10,670,300	7,921,277	871,700	1,632,000	6,733,600
	$	40,683,255	35,909,260	3,318,088	7,109,776	16,861,316
Argentina	cwt.	9,578,200	3,584,000	13,914,800	29,237,100	15,827,600
	$	38,696,438	16,905,632	54,251,804	114,401,015	38,431,458
Canada	cwt.	1,635,700	129,200	188,600	343,500	5,789,200
	$	6,156,572	563,823	1,062,335	1,604,428	13,251,890
S. Africa (British)	cwt.	2,679,000	2,442,600	1,400,700	430,700	4,253,583
	$	11,760,042	11,058,668	6,191,836	1,757,665	10,201,448
India (British)	cwt.	500	198,400	–	2,400	51,900
	$	1,884	872,647	–	12,167	122,557
Other Br. Possessions	cwt.	19,100	48,700	44,500	26,360	122,800
	$	86,223	265,623	227,716	105,680	304,761
Rumania	cwt.	–	–	–	1,691,100	3,173,700
	$	–	–	–	6,253,462	8,726,780
Other countries	cwt.	130,500	2,500	350,800	412,900	629,500
	$	520,918	12,483	1,301,176	1,719,637	1,443,546
Total	cwt.	**25,008,918**	**14,490,177**	**16,860,900**	**33,840,060**	**36,757,283**
	$	**99,211,453**	**66,568,867**	**66,780,560**	**133,206,672**	**89,770,519**
Flour, wheat—						
United States	cwt.	8,401,782	17,963,100	10,274,070	5,837,400	7,900,742
	$	49,384,125	116,942,701	72,629,247	52,911,665	45,790,082
Australia	cwt.	1,851,900	1,679,100	1,577,000	1,481,200	1,380,700
	$	11,941,666	11,515,964	11,144,136	11,318,514	7,920,140
Canada	cwt.	3,955,500	5,564,700	5,566,100	2,318,601	5,866,019
	$	25,548,915	37,336,410	39,530,936	21,478,717	34,683,492
China	cwt.	116,500	929,200	190,700	2,067,600	407,210
	$	705,219	6,423,075	1,302,729	15,856,296	3,044,635

26.—Quantities and Values of Selected Animal and Agricultural Food Products imported into the United Kingdom, by Countries whence imported, during the five calendar years, 1917-1921—concluded.

(Values converted at par of exchange. £1=$4.86⅔.)

Imports by Countries.		1917.	1918.	1919.	1920.	1921.
Flour, wheat—concluded.						
Japan	cwt.	356,400	136,900	31,200	1,100	2,000
	$	2,198,944	920,627	214,323	7,446	9,534
Spain	cwt.	–	–	–	–	81,200
	$	–	–	–	–	491,407
Other countries	cwt.	17,000	86,600	72,000	263,839	203,184
	$	106,040	517,015	394,283	1,824,470	838,965
Total	cwt.	**14,339,782**	**26,359,600**	**17,711,070**	**11,969,740**	**15,841,055**
	$	**89,884,909**	**173,655,792**	**125,215,654**	**103,397,108**	**92,778,255**
Oatmeal—						
United States	cwt.	489,971	633,646	332,763	66,023	135,050
	$	4,174,052	5,059,406	2,553,769	514,275	848,586
Canada	cwt.	176,961	242,924	219,618	86,368	193,950
	$	1,262,296	1,820,401	1,652,861	685,416	1,013,449
Other countries	cwt.	359	8,704	4,376	2,421	1,074
	$	2,166	60,920	35,064	17,807	6,892
Total	cwt.	**667,291**	**885,274**	**556,757**	**154,812**	**330,074**
	$	**5,438,514**	**6,940,727**	**4,241,694**	**1,217,498**	**1,868,927**
Rolled Oats[1]—						
United States	cwt.	1,468,658	1,826,569	653,383	258,947	205,142
	$	12,189,180	15,052,562	5,653,612	2,435,314	1,495,317
Canada	cwt.	107,563	47,344	161,444	253,845	304,181
	$	762,815	369,711	1,367,937	2,693,062	2,468,763
Other countries	cwt.	2,723	5,479	1,067	10,380	8,550
	$	26,548	42,427	8,088	80,928	45,216
Total	cwt.	**1,578,944**	**1,879,392**	**815,894**	**523,172**	**517,873**
	$	**12,978,543**	**15,464,700**	**7,029,637**	**5,209,304**	**4,009,296**

[1]Including other oat products in 1920 and 1921.

27.—Quantities and Values of Animal and Agricultural Products Exported from the United States to Principal Countries for the year ended June 30, 1917, and the calendar years 1918, 1919, 1920 and 1921.

(From the U.S. Reports on Foreign Commerce and Navigation.)

Exports by Countries.		June 30.	December 31.			
		1917.	1918.	1919.	1920.	1921.
Live Cattle—						
Belgium	NO.	–	–	9,067	20,300	2,013
	$	–	–	1,759,021	5,734,656	263,075
Cuba	NO.	1,476	1,333	13,943	20,766	15,182
	$	88,456	122,623	627,649	2,043,021	745,715
France	NO.	–	–	11,314	184	84
	$	–	–	2,179,406	43,144	16,800
United Kingdom	NO.	–	–	–	100	31,324
	$	–	–	–	20,000	4,399,949
Bermuda	NO.	842	318	10	31	20
	$	99,405	41,006	2,150	8,336	5,304
Canada	NO.	6,382	7,314	11,192	4,624	7,823
	$	462,728	567,415	858,621	575,194	728,399
Mexico	NO.	4,324	7,885	23,923	27,758	138,239
	$	231,893	256,116	823,250	1,478,779	5,139,263
Other countries	NO.	506	430	410	11,539	1,848
	$	32,854	95,598	189,424	849,395	442,065
Total	NO.	**13,387**	**17,280**	**69,859**	**85,302**	**196,533**
	$	**949,503**	**1,082,758**	**6,439,521**	**10,752,525**	**11,740,570**

27.—Quantities and Values of Animal and Agricultural Products Exported from the United States to Principal Countries for the year ended June 30, 1917, and the calendar years 1918, 1919, 1920 and 1921—con.

Exports by Countries.		June 30.	December 31.			
		1917.	1918.	1919.	1920.	1921.
Live Hogs—						
United Kingdom	NO.	1,909	–	–	178	–
	$	24,976	–	–	6,230	–
Mexico	NO.	10,402	132	3,987	5,237	24,217
	$	164,337	4,068	85,392	135,009	409,528
Cuba	NO.	9,288	9,583	19,947	49,021	98,015
	$	146,925	276,475	521,035	1,494,739	1,338,169
Other countries	NO.	326	593	811	814	835
	$	11,614	53,196	77,484	87,806	55,844
Total	NO.	**21,926**	**10,308**	**24,745**	**55,250**	**123,067**
	$	**347,852**	**333,729**	**683,911**	**1,723,784**	**1,803,541**
Live Horses—						
France	NO.	117,842	–	862	266	72
	$	26,946,646	–	287,516	136,100	34,000
Italy	NO.	21,473	811	8	12	6
	$	5,274,570	174,740	43,000	6,000	3,000
United Kingdom	NO.	100,110	33,547	98	356	346
	$	20,594,684	7,134,298	100,600	307,600	181,525
Canada	NO.	28,546	13,032	9,848	7,062	3,785
	$	4,763,909	1,992,305	1,358,404	1,250,872	574,962
Mexico	NO.	2,659	749	5,438	3,285	10,330
	$	106,950	42,475	271,642	230,483	583,825
Cuba	NO.	1,000	2,930	737	2,200	939
	$	155,910	480,652	133,575	437,687	148,423
Other countries	NO.	7,044	101	2,700	1,157	1,843
	$	1,682,660	34,005	661,659	347,658	537,103
Total	NO.	**278,674**	**51,170**	**19,691**	**14,338**	**17,321**
	$	**59,525,329**	**9,858,329**	**2,856,396**	**2,716,400**	**2,062,838**
Live Mules—						
France	NO.	12,376	–	–	339	–
	$	2,683,428	–	–	135,600	–
United Kingdom	NO.	51,303	12,267	–	–	1
	$	10,443,687	2,474,050	–	–	250
Canada	NO.	2,435	2,497	342	156	119
	$	402,829	463,282	38,518	26,450	16,085
Mexico	NO.	2,807	1,244	3,696	5,214	6,919
	$	262,283	130,278	503,230	834,159	399,697
Cuba	NO.	2,124	435	2,039	2,037	612
	$	350,151	90,670	440,688	576,284	129,809
Egypt	NO.	32,797	–	–	–	–
	$	6,941,460	–	–	–	–
Other countries	NO.	32,847	876	1,045	1,343	982
	$	6,717,016	202,373	206,771	293,850	169,619
Total	NO.	**136,689**	**17,319**	**7,122**	**9,089**	**8,633**
	$	**27,800,854**	**3,360,653**	**1,189,180**	**1,866,343**	**715,460**
Live sheep—						
Canada	NO.	56,648	7,512	29,620	6,724	26,402
	$	341,863	104,580	273,924	58,582	194,969
United Kingdom	NO.	–	–	–	2	9,195
	$	–	–	–	12	85,035
Mexico	NO.	760	115	4,421	39,630	78,291
	$	9,922	1,810	74,746	416,337	285,467
Japan	NO.	32	93	176	729	65
	$	1,400	5,800	12,242	69,450	3,900
Other countries	NO.	1,371	242	312	1,795	3,443
	$	14,750	8,692	9,050	27,321	35,362
Total	NO.	**58,811**	**7,962**	**34,531**	**48,878**	**117,396**
	$	**367,935**	**120,882**	**369,974**	**571,690**	**604,733**
Bother animals, including fowls—						
Cuba	$	49,792	76,752	154,223	214,081	278,458
Canada	$	160,098	163,472	207,321	248,701	228,743
Mexico	$	123,830	32,834	57,373	142,908	351,945
Other countries	$	57,660	15,587	45,785	96,528	80,768
Total	$	**391,380**	**288,645**	**464,702**	**702,218**	**939,914**

27.—Quantities and Values of Animal and Agricultural Products Exported from the United States to Principal Countries for the year ended June 30, 1917, and the calendar years 1918, 1919, 1920 and 1921—con.

Exports by Countries.	June 30.	December 31.			
	1917.	1918.	1919.	1920.	1921.
Barley—					
Belgium.....bush.	200,679	1,783,545	2,330,882	1,469,499	2,983,960
$	234,073	2,668,357	3,314,343	2,384,639	2,473,942
Denmark.....bush.	722,284	–	1,419,723	–	737,420
$	710,282	–	1,897,225	–	558,066
France.....bush.	273,949	2,866,026	16,626	800	167,135
$	223,300	5,188,815	22,438	2,240	113,165
Canada.....bush.	308,102	498,714	746,921	206,415	52,362
$	316,698	743,237	967,663	267,079	32,911
Greece.....bush.	91,000	–	465,683	246,022	–
$	72,800	–	726,325	390,538	–
Italy.....bush.	201,593	3,190,683	410,418	–	–
$	302,390	5,570,839	410,418	–	–
Netherlands.....bush.	2,840,162	–	6,302,411	557,791	1,807,267
$	2,924,706	–	8,023,947	673,330	1,472,101
Norway.....bush.	1,217,797	218,442	115,035	68,001	844,591
$	1,366,275	334,883	179,888	114,876	663,979
Sweden.....bush.	459,696	–	368,743	–	406,555
$	703,660	–	492,248	–	373,618
United Kingdom.....bush.	9,112,279	9,775,514	24,783,469	14,262,383	18,073,433
$	10,850,329	15,241,942	36,761,108	21,641,125	14,322,509
Mexico.....bush.	42,981	36,955	80,793	105,991	308,864
$	46,298	51,814	115,081	164,335	278,254
Panama.....bush.	194	24	424	926,752	438
$	266	44	1,058	1,443,977	1,069
Other countries.....bush.	910,365	435,316	570,712	10,573	424,975
$	1,276,205	765,446	920,577	83,055	397,442
Total.....bush.	**16,381,077**	**18,805,219**	**37,611,840**	**17,854,227**	**25,834,000**
$	**19,027,082**	**30,565,377**	**53,832,319**	**27,165,189**	**20,687,056**
Bran and middlings, **total**.....ton[1]	**7,428**	**7,372**	**4,517**	**3,091**	**11,549**
$	**279,650**	**337,285**	**233,114**	**162,958**	**256,959**
Buckwheat, **total**.....bush.	**260,102**	**1,420**	**186,074**	**299,693**	**428,981**
$	**350,606**	**3,021**	**307,454**	**543,468**	**541,172**
Corn—					
Belgium.....bush.	581,371	3,467,151	1,009,969	71,787	1,559,756
$	590,771	6,371,356	1,607,493	89,485	1,240,955
Denmark.....bush.	7,075,254	–	334,711	173,357	5,965,298
$	9,205,072	–	602,472	196,407	4,969,064
France.....bush.	1,533,183	1,369,962	6	190,536	547,937
$	1,758,032	2,462,494	27	404,114	428,023
Italy.....bush.	1,156,664	2,196,321	–	–	248,497
$	1,519,306	3,951,495	–	–	191,421
Netherlands.....bush.	7,923,706	46,004	100,168	423,604	17,843,464
$	8,237,912	92,009	167,192	519,717	13,750,069
Sweden.....bush.	399,574	–	–	–	791,573
$	462,577	–	–	–	618,625
Germany.....bush.	–	–	–	1,323,770	12,729,289
$	–	–	–	1,633,161	10,258,795
United Kingdom.....bush.	24,493,817	15,658,493	948,493	2,706,805	15,811,050
$	27,860,538	29,041,245	1,585,886	4,222,501	12,145,122
Canada.....bush.	15,724,838	13,228,954	6,542,025	10,064,668	58,582,806
$	16,158,665	19,530,071	10,690,552	14,630,123	36,433,565
Mexico.....bush.	2,530,699	2,736,739	133,887	770,814	11,871,546
$	3,133,896	5,739,816	246,746	928,957	10,130,049
Cuba.....bush.	2,819,278	1,074,099	1,964,540	1,893,793	2,308,746
$	2,948,100	1,841,445	3,441,163	3,530,258	1,971,857
Other countries.....bush.	482,458	121,368	158,734	142,285	714,543
$	622,335	239,404	282,855	298,958	629,443
Total.....bush.	**64,720,842**	**39,899,091**	**11,192,533**	**17,761,420**	**128,974,505**
$	**72,497,204**	**69,269,329**	**18,624,386**	**26,453,681**	**92,766,988**
Cornmeal—					
United Kingdom.....brl.	178,211	480,717	172,223	117,610	190,062
$	1,025,579	5,161,275	1,449,389	975,177	784,846
Canada.....brl.	61,472	128,758	20,812	44,667	46,665
$	288,915	1,173,572	187,805	341,842	192,969
British West Indies.....brl.	154,867	70,634	65,228	146,330	127,340
$	858,940	696,008	537,016	1,245,356	560,869

[1]Ton=2,240 lb.

27.—Quantities and Values of Animal and Agricultural Products Exported from the United States to Principal Countries for the year ended June 30, 1917, and the calendar years 1918, 1919, 1920 and 1921—con.

Exports by Countries.		June 30.	December 31.			
		1917.	1918.	1919.	1920.	1921.
Cornmeal—concluded.						
Dutch West Indies	brl.	25,557	3,700	10,786	33,034	41,283
	$	135,472	36,798	91,405	288,084	185,417
Italy	brl.	1	220,661	283,228	1	2,235
	$	4	2,423,896	2,923,511	5	10,910
France	brl.	1,563	220,803	1,161	-	36,469
	$	8,232	2,443,522	9,180	-	141,108
Belgium	brl.	-	241,443	90,285	1,406	13,627
	$	-	2,378,235	758,883	13,449	56,890
Netherlands	brl.	330	54,120	239,096	25,614	37,365
	$	1,139	526,232	1,936,473	186,612	107,473
Switzerland	brl.	-	31,868	145,664	-	-
	$	-	332,671	1,426,922	-	-
Egypt	brl.	-	-	-	414,004	125,032
	$	-	-	-	3,678,963	958,847
Other countries	brl.	86,112	337,312	173,951	84,499	182,716
	$	439,042	3,588,894	1,599,903	748,910	695,023
Total	brl.	**508,113**	**1,790,016**	**1,202,434**	**867,165**	**802,794**
	$	**2,757,324**	**18,761,103**	**10,920,487**	**7,478,398**	**3,694,352**
Dried grain and malt sprouts, **total**	ton[1]	**1,505**	**217**	**1,960**	**401**	**108**
	$	**47,809**	**13,394**	**125,886**	**23,949**	**5,708**
Oatmeal and rolled oats—						
Netherlands	lb.	3,623,851	-	49,080,564	12,000,633	22,810,316
	$	116,049	-	2,382,325	594,490	701,151
Norway	lb.	18,265,844	6,051,981	8,700,665	519,350	1,344,425
	$	700,986	395,386	410,467	25,568	45,799
United Kingdom	lb.	69,086,773	255,585,340	73,954,909	30,670,797	39,450,035
	$	2,711,188	14,639,040	4,117,928	1,616,672	1,496,531
Other countries	lb.	19,926,876	37,560,694	89,230,499	22,729,735	35,233,885
	$	962,931	2,318,654	5,088,662	1,654,616	1,501,756
Total	lb.	**110,903,344**	**299,198,015**	**220,966,637**	**65,920,515**	**98,838,661**
	$	**4,191,154**	**17,353,080**	**11,999,382**	**3,891,346**	**3,745,237**
Oats—						
Belgium	bush.	86,851	-	8,120,038	2,600,526	-
	$	68,000	-	6,678,566	2,556,026	-
France	bush.	53,561,600	18,861,125	14,186,235	6,274,945	17,600
	$	32,258,495	16,977,337	11,626,830	6,187,025	10,836
Switzerland	bush.	-	356,803	2,598,113	-	-
	$	-	331,835	2,042,303	-	-
Italy	bush.	11,761,339	7,831,938	1,849,270	-	-
	$	7,108,222	6,837,538	1,643,220	-	-
Netherlands	bush.	4,550,437	-	2,819,985	499,114	67,252
	$	2,699,830	-	2,318,083	460,626	46,447
Sweden	bush.	-	-	156,240	30,000	44,667
	$	-	-	124,000	22,500	23,360
United Kingdom	bush.	14,889,314	54,541,721	20,579,701	134,624	1,104
	$	10,417,599	48,062,866	17,982,037	109,087	670
Canada	bush.	856,859	30,696,141	2,433,463	1,245,766	1,706,008
	$	439,323	23,916,056	1,765,055	916,229	679,015
Cuba	bush.	1,378,842	1,690,332	2,126,272	1,606,224	918,046
	$	885,728	1,631,598	1,844,482	1,608,685	493,325
Other countries	bush.	1,859,159	484,872	425,162	486,675	469,468
	$	1,157,784	464,407	410,718	477,926	356,061
Total	bush.	**88,944,401**	**114,462,932**	**55,294,479**	**12,877,874**	**3,224,145**
	$	**55,034,981**	**98,221,637**	**46,435,294**	**12,338,104**	**1,609,714**
Mill feed, **total**	ton[1]	**46,112**	**9,652**	**12,124**	**10,481**	**15,600**
	$	**1,693,752**	**466,242**	**784,296**	**579,914**	**575,519**
Rye—						
Belgium	bush.	-	304,206	2,736,984	11,924,341	311,904
	$	-	683,766	5,056,864	25,403,356	416,520
Denmark	bush.	1,168,437	-	739,993	214,285	333,241
	$	1,718,728	-	1,388,919	535,712	339,361

[1]Ton=2,240 lb.

27.—Quantities and Values of Animal and Agricultural Products Exported from the United States to Principal Countries for the year ended June 30, 1917, and the calendar years 1918, 1919, 1920 and 1921—con.

Exports by Countries.	June 30.	December 31.			
	1917.	1918.	1919.	1920.	1921.
Rye—concluded.					
Switzerland.....bush.	46,540	467,000	1,276,566	54,722	–
$	97,736	1,060,300	2,300,128	105,870	–
Netherlands.....bush.	772,569	–	1,810,605	7,012,562	3,832,266
$	1,156,940	–	3,266,237	15,691,106	6,033,950
Norway.....bush.	7,452,594	690,424	5,054,730	4,666,629	3,006,422
$	12,444,294	1,385,964	8,944,487	10,272,619	4,012,910
Sweden.....bush.	379,101	–	–	–	446,860
$	604,253	–	–	–	640,054
United Kingdom.....bush.	1,293,060	3,702,426	18,068,982	718,781	1,078,153
$	2,271,565	7,462,648	35,254,238	1,410,880	1,576,603
Canada.....bush.	1,129,469	120,615	1,385,498	6,501,468	7,142,595
$	1,605,223	202,176	2,063,613	13,413,809	8,193,893
Italy.....bush.	1,017,883	1,756,764	661,231	2,415,084	1,131,693
$	1,700,431	3,574,613	1,183,615	4,612,682	2,040,097
France.....bush.	–	336,650	838,063	12,973,968	351,462
$	–	693,952	1,658,689	27,471,994	619,700
Finland.....bush.	–	–	6,000	1,801,275	1,104,693
$	–	–	10,080	4,194,708	1,543,054
Germany.....bush.	–	–	–	7,139,942	9,442,785
$	–	–	–	15,741,694	16,034,292
Gibraltar.....bush.	–	–	–	1,233,189	357,061
$	–	–	–	2,398,082	649,051
Poland and Danzig.....bush.	–	–	–	274,292	1,209,828
$	–	–	–	670,835	2,010,646
Other countries.....bush.	362	252,554	319,514	139,952	62,758
$	461	552,199	659,362	316,190	104,289
Total.....bush.	**13,260,015**	**7,631,639**	**32,898,166**	**57,070,490**	**29,811,721**
$	**21,599,631**	**15,615,618**	**61,786,232**	**122,239,537**	**44,214,420**
Rye Flour—					
Belgium.....brl.	–	438,233	86,946	14,845	–
$	–	4,462,893	857,679	151,614	–
France.....brl.	890	96,897	–	–	–
$	9,614	1,021,747	–	–	–
Norway.....brl.	59,632	403,845	230,072	282,905	5,641
$	438,458	4,599,370	2,148,643	2,739,258	39,496
Netherlands.....brl.	1,508	133,310	8,809	20,691	5,385
$	8,914	1,479,421	72,526	245,988	43,944
Canada.....brl.	3,207	46,50[illegible]	8,025	3,452	1,457
$	19,546	473,314	61,111	39,532	13,182
United Kingdom.....brl.	1,718	213,437	826,629	335	521
$	10,967	2,197,273	8,246,875	2,536	2,672
Other countries.....brl.	6,959	113,844	105,549	41,518	42,650
$	37,848	1,215,712	1,037,674	459,510	274,861
Total.....brl.	**73,914**	**1,446,075**	**1,266,030**	**363,746**	**55,654**
$	**525,347**	**15,449,730**	**12,424,508**	**3,638,438**	**374,155**
Wheat—					
Belgium.....bush.	2,698,044	12,628,186	24,476,490	20,665,729	22,469,757
$	4,887,416	30,107,271	59,901,083	55,832,260	38,036,456
France.....bush.	16,253,262	6,386,134	27,590,718	26,444,984	8,988,242
$	31,698,762	14,675,271	66,552,585	72,370,900	15,479,471
Germany.....bush.	–	–	–	8,246,213	36,931,189
$	–	–	–	22,511,012	61,192,875
Gibraltar.....bush.	2,480,146	1,475,449	1,510,909	4,181,694	4,565,276
$	4,318,783	3,481,796	3,574,010	10,813,188	7,942,148
Greece.....bush.	4,811,158	–	96,225	1,415,360	4,116,067
$	9,005,268	–	230,940	3,817,491	7,081,040
Italy.....bush.	13,746,512	16,337,436	38,264,883	32,110,050	60,842,457
$	26,743,498	38,263,712	91,054,928	85,356,226	96,118,352
Netherlands.....bush.	19,127,675	2,236,354	1,962,249	11,912,662	25,228,449
$	37,946,031	5,770,866	4,848,540	32,678,644	39,591,410
Norway.....bush.	3,156,279	383,144	933	797,522	657,337
$	6,114,705	918,336	2,240	2,211,030	978,994
Portugal.....bush.	600,980	460,066	988,427	1,287,465	804,766
$	1,576,600	1,104,149	2,372,223	3,337,669	1,132,509
Spain.....bush.	851,550	110,550	138,133	7,099,430	4,346,426
$	1,454,474	258,687	370,000	18,562,652	7,301,655
Sweden.....bush.	5,385,480	–	–	1,012,835	890,030
$	9,676,651	–	–	2,615,059	1,420,784

27.—Quantities and Values of Animal and Agricultural Products Exported from the United States to Principal Countries for the year ended June 30, 1917, and the calendar years 1918, 1919, 1920 and 1921—con.

Exports by Countries.		June 30.	December 31.			
		1917.	1918.	1919.	1920.	1921.
Wheat—concluded.						
Switzerland	bush.	6,045,799	1,499,548	6,134,334	367,363	40,364
	$	12,028,332	3,671,704	15,531,481	1,074,673	64,178
United Kingdom	bush.	67,976,120	43,146,559	44,818,552	77,368,545	63,672,052
	$	139,429,196	100,848,344	107,503,619	215,241,377	94,133,442
Canada	bush.	4,714,836	26,493,421	1,421,613	14,811,672	25,990,974
	$	9,856,529	61,464,108	3,314,818	41,280,833	34,528,566
Brazil	bush.	166	16,500	130	2,829,192	1,655,906
	$	319	39,176	281	8,201,002	2,357,022
Peru	bush.	246,034	1	–	561,880	964,194
	$	333,207	2	–	1,237,984	1,155,016
Egypt	bush.	–	–	–	1,107,080	37,333
	$	–	–	–	3,438,796	43,306
British S. Africa	bush.	5,058	–	28	539,887	18,700
	$	6,887	–	60	1,660,203	23,749
French Africa	bush.	–	–	–	2,891,387	1,906,066
	$	–	–	–	7,713,338	4,119,841
Morocco	bush.	–	–	–	799,819	126,098
	$	–	–	–	2,225,456	243,900
Panama	bush.	96,607	43	34	713,044	271,008
	$	201,904	150	224	1,755,920	490,013
Japan	bush.	–	–	–	10,141	8,224,764
	$	–	–	–	24,326	9,893,170
Mexico	bush.	–	1,561	134,003	299,211	2,661,109
	$	–	3,755	329,187	814,702	3,842,886
British India	bush.	–	–	–	–	1,807,310
	$	–	–	–	–	2,044,510
Other countries	bush.	1,635,721	2,148	548,809	804,169	2,841,727
	$	2,901,143	5,661	1,312,077	2,200,745	3,838,043
Total	bush.	**149,831,427**	**111,177,103**	**148,086,470**	**218,287,334**	**289,057,601**
	$	**298,179,705**	**259,612,978**	**356,898,296**	**596,975,396**	**433,053,236**
Wheat flour—						
Belgium	brl.	–	1,233,526	867,434	884,876	195,551
	$	–	13,943,165	9,399,923	9,677,967	1,327,239
Denmark	brl.	168,405	43,044	140,854	37,715	318,742
	$	1,366,495	470,753	1,584,563	434,929	2,350,815
Finland	brl.	–	–	41,729	369,165	444,730
	$	–	–	499,124	4,256,109	3,369,357
Austria-Hungary	brl.	–	–	263,497	1,155,680[1]	–
	$	–	–	2,985,683	12,457,354[1]	–
France	brl.	1,429,128	5,015,150	4,718,188	273,840	15,113
	$	11,958,809	55,447,319	50,374,636	2,492,315	109,944
Germany	brl.	–	–	42,324	1,077,675	1,725,877
	$	–	–	467,957	11,856,373	11,859,440
Gibraltar	brl.	7,359	224,604	1,312,677	51,823	25,779
	$	39,455	2,428,851	14,105,753	619,372	212,894
Greece	brl.	388,708	48,735	136,023	252,026	331,970
	$	3,000,200	704,238	1,679,564	2,943,838	2,809,873
Italy	brl.	987,686	2,929,005	3,006,825	1,410,243	56,122
	$	7,838,168	34,078,295	32,726,716	15,115,928	382,363
Netherlands	brl.	591,182	105,090	1,082,207	730,943	1,204,137
	$	4,087,784	1,284,629	12,795,766	8,636,848	8,343,495
Norway	brl.	715,077	192,086	45,745	160,935	413,039
	$	5,626,941	2,329,363	493,535	1,797,301	2,802,178
Sweden	brl.	21,883	49	32,217	140,991	242,948
	$	187,278	586	322,115	1,486,310	1,925,661
Switzerland	brl.	55	577,851	204,270	11,577	–
	$	372	6,349,631	2,291,091	138,934	–
United Kingdom	brl.	3,015,525	10,013,533	10,440,148	3,435,239	3,997,691
	$	21,947,731	113,037,706	115,699,430	37,203,126	27,601,345
British Honduras	brl.	24,082	20,023	24,111	30,097	21,926
	$	195,340	234,755	287,661	376,874	188,425
Canada	brl.	77,115	61,045	7,316	25,250	72,521
	$	580,326	621,523	80,154	277,585	488,302
Central Am. States	brl.	511,884	39,464	423,165	418,101	450,158
	$	4,154,649	447,963	4,783,264	5,031,678	3,391,782
Mexico	brl.	930,564	65,834	502,477	243,439	353,155
	$	7,543,254	728,274	5,639,847	2,862,188	2,841,303
Egypt	brl.	1,072	81,355	1,094	1,046,978	141,861
	$	5,000	869,636	13,834	11,138,206	1,105,278

[1]Austria only.

27.—Quantities and Values of Animal and Agricultural Products Exported from the United States to Principal Countries for the year ended June 30, 1917, and for the calendar years 1918, 1919, 1920 and 1921—con.

Exports by Countries.		June 30.	December 31.			
		1917.	1918.	1919.	1920.	1921.
Wheat flour—concluded.						
British W. Indies	brl.	372,242	111,582	221,346	354,953	275,728
	$	3,003,576	1,245,682	2,332,141	3,888,746	2,019,334
Cuba	brl.	1,016,675	541,564	1,408,698	1,389,990	1,065,581
	$	8,661,925	5,894,603	15,648,989	17,044,543	8,969,019
French W. Indies	brl.	129,922	33,425	80,712	131,669	93,298
	$	1,082,102	393,531	913,801	1,607,460	739,196
Hayti	brl.	127,458	378	268,243	361,321	139,290
	$	1,012,033	4,344	3,240,491	4,838,964	1,191,400
Other West Indies	brl.	143,858	10,771	108,247	155,544	103,262
	$	1,246,137	131,080	1,304,426	2,014,166	911,680
Brazil	brl.	301,614	596	279,564	623,198	200,718
	$	2,743,818	4,864	3,384,773	8,396,972	2,098,770
Chile	brl.	79,997	20	200	2,527	515
	$	482,944	238	2,600	28,628	3,479
Venezuela	brl.	146,812	530	124,893	165,895	116,411
	$	1,185,658	6,263	1,454,532	2,105,734	990,981
Poland and Danzig	brl.	–	–	–	2,249,558	988,596
	$	–	–	–	24,505,724	6,202,178
Hong Kong	brl.	61,800	–	10,597	192,936	737,727
	$	306,756	–	110,902	1,992,470	4,103,350
Japan	brl.	4,083	–	2,528	107,024	382,440
	$	35,652	–	27,850	1,201,949	1,986,659
Philippine Islands	brl.	76,089	22	54,904	143,469	254,755
	$	420,480	337	620,288	1,617,888	1,726,646
Other countries	brl.	612,503	357,420	697,678	2,219,315	2,431,164
	$	4,485,591	3,995,793	8,181,339	26,425,969	15,645,739
Total	brl.	**11,942,778**	**21,706,700**	**25,449,881**	**19,853,992**	**16,800,805**
	$	**93,198,474**	**244,653,422**	**293,452,748**	**224,472,448**	**117,698,225**
Eggs—						
United Kingdom	doz.	4,359,192	5,493,717	15,626,519	4,311,216	3,981,419
	$	1,461,494	2,652,037	8,254,167	2,427,267	1,414,325
Canada	doz.	10,850,678	2,959,157	9,243,677	7,078,137	7,350,732
	$	3,305,017	1,172,184	4,317,323	3,333,658	2,504,461
Cuba	doz.	7,447,257	10,048,002	10,463,181	12,440,565	15,015,726
	$	2,045,344	3,606,957	4,607,199	6,347,594	4,892,260
Other countries	doz.	2,269,297	2,437,402	3,456,093	3,011,854	6,948,410
	$	757,056	1,017,036	1,633,542	1,460,625	1,999,660
Total	doz.	**24,926,424**	**20,938,278**	**38,789,470**	**26,841,772**	**33,291,287**
	$	**7,568,911**	**8,428,214**	**18,812,231**	**13,569,144**	**10,810,706**
Apples, dried—						
United Kingdom	lb.	2,739,091	696,357	5,748,424	2,483,708	2,366,509
	$	213,953	87,322	755,058	323,686	249,265
Denmark	lb.	941,210	190,700	3,512,038	893,514	1,239,431
	$	83,929	31,500	657,108	162,421	168,221
Norway	lb.	233,651	156,470	2,283,759	169,200	410,100
	$	17,727	18,158	400,006	31,147	50,356
Netherlands	lb.	187,286	–	490,503	1,283,225	7,454,042
	$	13,109	–	93,068	218,723	837,597
Germany	lb.	–	–	10,759	43,258	3,512,921
	$	–	–	2,618	4,341	333,869
Sweden	lb.	1,146,625	185	7,309,782	1,479,766	1,573,454
	$	80,161	45	1,296,930	316,182	188,982
Other countries	lb.	5,109,928	1,156,771	9,349,094	2,475,135	3,405,849
	$	388,608	174,325	905,040	452,487	378,553
Total	lb.	**10,357,791**	**2,200,483**	**24,704,359**	**8,827,806**	**19,962,306**
	$	**797,487**	**311,350**	**4,109,828**	**1,508,987**	**2,206,843**
Apples, green or ripe—						
Denmark	brl.	11,989	2,201	33,281	12,982	28,638
	$	54,593	19,804	393,848	145,632	265,657
Sweden	brl.	3,573	–	34,950	14,432	13,465
	$	25,838	–	457,119	156,052	107,704
Norway	brl.	20,410	667	147,586	67,434	80,233
	$	104,642	7,950	1,607,143	778,026	463,223
United Kingdom	brl.	1,147,412	125,987	1,209,855	1,250,033	1,498,839
	$	5,491,089	837,202	9,557,126	9,788,479	11,065,812

27.—Quantities and Values of Animal and Agricultural Products Exported from the United States to Principal Countries for the year ended June 30, 1917, and for the calendar years, 1918, 1919, 1920 and 1921—con.

Exports by Countries.		June 30.	December 31.			
		1917.	1918.	1919.	1920.	1921.
Apples, green or ripe—concluded.						
Canada	brl.	314,955	331,453	158,859	274,358	166,410
	$	948,967	1,467,319	1,121,728	1,527,408	777,290
Argentina	brl.	58,453	4,704	15,159	32,688	9,829
	$	413,432	43,159	207,822	374,070	145,975
Brazil	brl.	25,297	5,573	16,880	24,656	13,760
	$	161,177	45,077	206,536	284,181	177,961
Australia	brl.	25,343	33	–	3,766	–
	$	114,611	237	–	33,900	–
Other countries	brl.	132,565	109,298	95,797	117,362	125,050
	$	664,887	714,455	829,960	1,000,985	978,243
Total	brl.	**1,739,997**	**579,916**	**1,712,367**	**1,797,711**	**1,936,224**
	$	**7,979,236**	**3,135,203**	**14,471,282**	**14,088,733**	**13,981,865**
Berries, **total**	$	**822,977**	**887,561**	**1,181,742**	**791,555**	**775,193**
Peaches, dried—						
United Kingdom	lb.	1,128,811	2,073,060	1,290,116	3,877,743	2,703,191
	$	82,265	238,495	175,611	669,585	313,079
Canada	lb.	3,320,917	2,152,058	3,326,675	1,609,354	1,275,234
	$	227,844	226,870	581,528	310,934	140,665
Other countries	lb.	3,737,860	614,480	4,405,543	2,437,734	914,699
	$	295,511	79,090	802,734	485,090	330,896
Total	lb.	**8,178,588**	**4,839,598**	**9,022,334**	**7,924,831**	**6,893,124**
	$	**605,620**	**544,455**	**1,559,873**	**1,465,609**	**784,640**
Pears—						
United Kingdom	$	545,916	7,196	234,180	761,965	838,131
Canada	$	432,180	748,676	1,141,222	909,370	586,849
Cuba	$	98,349	114,544	191,431	205,608	158,680
Brazil	$	126,340	25,857	85,074	191,275	101,924
Other countries	$	153,474	32,568	112,764	133,903	95,201
Total	$	**1,356,259**	**928,841**	**1,764,671**	**2,202,121**	**1,780,785**
Hay—						
France	ton[1]	41,084	–	–	–	–
	$	810,194	–	–	–	–
United Kingdom	ton[1]	529	1,429	1,001	1,324	514
	$	12,080	42,494	40,275	46,408	16,677
Canada	ton[1]	4,107	6,381	14,394	45,431	26,348
	$	73,265	183,535	401,076	1,222,628	457,836
Mexico	ton[1]	26,070	6,859	6,793	11,282	15,194
	$	484,114	185,613	147,068	326,184	346,136
Cuba	ton[1]	8,611	11,210	6,879	2,490	7,738
	$	183,414	403,193	259,249	104,320	220,304
Philippine Islands	ton[1]	840	360	1,241	484	897
	$	18,170	11,617	47,004	19,885	28,874
Other countries	ton[1]	4,288	2,103	1,834	2,143	1,469
	$	104,599	77,578	68,303	77,971	41,459
Total	ton[1]	**85,529**	**28,342**	**32,142**	**63,154**	**52,160**
	$	**1,685,836**	**904,030**	**962,975**	**1,797,396**	**1,111,283**
Hides and skins, calf—						
Canada	lb.	1,332,399	2,188,293	4,340,084	956,148	4,454,452
	$	540,602	851,512	3,086,227	613,950	979,703
Other countries	lb.	41,639	25,000	314,251	183,505	894,104
	$	8,857	15,000	131,398	65,748	171,898
Total	lb.	**1,374,038**	**2,213,293**	**4,654,335**	**1,139,653**	**5,348,556**
	$	**549,459**	**866,512**	**3,217,625**	**679,698**	**1,151,601**
Hides and skins, cattle—						
France	lb.	487,070	62,000	3,288,491	946,519	588,375
	$	114,500	20,300	838,207	148,199	53,451
Finland	lb.	–	–	1,860,000	–	–
	$	–	–	742,140	–	–

[1] Ton = 2,240 lb.

27.—Quantities and Values of Animal and Agricultural Products Exported from the United States to Principal Countries for the year ended June 30, 1917, and for the calendar years 1918, 1919, 1920 and 1921—con.

Exports by Countries.		June 30.	December 31.			
		1917.	1918.	1919.	1920.	1921.
Hides and skins, cattle—concluded.						
Germany	lb.	–	–	–	504,085	3,245,796
	$	–	–	–	226,451	419,358
Belgium	lb.	–	–	1,064,278	741,228	443,540
	$	–	–	340,167	256,177	31,290
Italy	lb.	–	51,020	328,550	115,700	3,600
	$	–	30,772	169,625	58,850	560
Netherlands	lb.	713,167	–	1,133,017	216,587	1,625,204
	$	198,967	–	472,697	87,163	129,408
Canada	lb.	4,376,575	1,599,216	6,559,849	5,641,545	6,025,705
	$	1,307,414	454,819	2,762,697	1,998,751	633,421
Japan	lb.	1,350,123	273,361	1,232,270	1,949,232	3,474,710
	$	315,448	64,465	430,461	604,104	437,669
Other countries	lb.	438,526	352,550	1,529,477	1,370,570	5,286,206
	$	105,028	111,595	534,352	381,447	464,304
Total	lb.	**7,365,461**	**2,338,147**	**16,995,932**	**11,485,466**	**20,693,136**
	$	**2,011,357**	**681,951**	**6,290,356**	**3,761,142**	**2,109,461**
Hides and skins, horse, **total**	lb.	**179,701**	**54,471**	**467,240**	**655,017**	**222,486**
	$	**32,900**	**13,864**	**135,176**	**142,706**	**21,226**
Hides and skins, all other—						
Canada	lb.	707,578	374,406	824,599	645,883	1,241,908
	$	224,232	169,620	341,865	340,503	217,932
Other countries	lb.	344,468	124,742	1,981,365	3,475,898	3,071,329
	$	122,883	45,873	910,299	1,278,837	506,314
Total	lb.	**1,052,046**	**499,148**	**2,805,964**	**4,121,781**	**1,313,237**
	$	**347,115**	**215,493**	**1,252,164**	**1,619,340**	**724,246**
Honey, **total**	lb.	–	**11,598,857**	**9,075,602**	**1,539,878**	**1,880,511**
	$	**736,139**	**2,223,396**	**1,955,091**	**265,352**	**225,246**
Hops—						
United Kingdom	lb.	823,654	76,424	12,523,653	21,421,599	13,375,667
	$	101,939	13,014	5,324,596	14,386,054	4,749,960
Canada	lb.	801,162	749,503	2,493,098	1,968,821	2,960,359
	$	121,614	151,795	1,143,269	1,103,767	869,525
France	lb.	59,205	40,000	1,054,067	10,200	31,310
	$	12,861	20,000	444,969	2,550	14,230
Japan	lb.	286,168	328,115	1,116,703	533,799	299,532
	$	43,222	86,195	734,786	375,551	104,983
Other countries	lb.	2,854,687	2,476,310	3,309,983	1,689,636	1,792,732
	$	494,290	699,594	1,184,635	1,220,550	584,297
Total	lb.	**4,824,876**	**3,670,352**	**20,797,504**	**25,624,055**	**18,459,600**
	$	**773,926**	**970,598**	**8,832,255**	**17,088,472**	**6,322,995**
Meat Products—						
Beef, canned—						
France	lb.	17,653,357	39,791,821	1,837,883	27,367	70,132
	$	4,231,426	14,031,746	752,282	7,747	11,242
Italy	lb.	187,634	47,675,117	15,405,107	512	576
	$	45,456	18,437,206	6,454,156	126	152
United Kingdom	lb.	40,218,190	51,250,973	13,947,951	1,795,554	3,762,787
	$	9,960,653	18,068,783	5,255,462	693,605	740,925
Austria-Hungary	lb.	–	–	2,407,790	–	–
	$	–	–	881,899	–	–
Poland and Danzig	lb.	–	–	–	16,722,800	98
	$	–	–	–	3,443,677	25
Belgium	lb.	–	244,848	6,471,198	703,419	395
	$	–	116,157	2,712,115	208,309	196
Germany	lb.	–	–	2,128,219	144,133	802,875
	$	–	–	694,053	36,443	136,470
Netherlands	lb.	–	–	2,016,928	362,342	–
	$	–	–	836,394	94,026	–
Sweden	lb.	–	188	5,530,871	20,846	–
	$	–	72	1,545,636	7,462	–
Other countries	lb.	9,476,944	2,494,216	4,121,380	3,980,028	1,440,385
	$	2,708,495	884,046	1,540,967	1,298,316	387,137
Total	lb.	**67,536,125**	**141,457,163**	**53,867,327**	**23,766,000**	**6,077,248**
	$	**16,946,030**	**51,498,010**	**20,672,964**	**5,789,711**	**1,276,147**

27.—Quantities and Values of Animal and Agricultural Products Exported from the United States to Principal Countries for the year ended June 30, 1917, and for the calendar years 1918, 1919, 1920 and 1921—con.

Exports by Countries.		June 30.	December 31.			
		1917.	1918.	1919.	1920.	1921.
Beef, fresh—						
France	lb.	38,042,276	47,170,950	–	730,217	–
	$	4,883,959	9,410,074	–	141,285	–
Italy	lb.	13,066,277	8,877,471	21,375,475	211,447	–
	$	1,569,318	1,715,353	4,621,058	40,682	–
United Kingdom	lb.	125,687,523	446,080,785	73,073,602	5,699,488	2,129,119
	$	17,338,095	96,364,943	17,206,380	1,019,012	281,347
Bermuda	lb.	1,326,911	929,837	823,486	1,185,243	1,165,789
	$	169,193	188,846	171,732	231,277	189,683
Canada	lb.	17,771,159	10,390,596	2,621,011	2,330,963	228,624
	$	2,171,951	1,728,229	481,298	393,236	37,544
Panama	lb.	235,034	357,366	51,950	86,537	317,522
	$	45,438	104,207	16,275	23,146	61,724
Belgium	lb.	360,272	105,030	23,469,603	35,205,492	4,897,473
	$	45,650	18,387	5,044,664	7,098,318	979,490
Germany	lb.	–	–	31,083,572	26,159,680	431,665
	$	–	–	7,499,508	5,167,412	54,428
Netherlands	lb.	–	–	13,703,452	15,922,196	14,615
	$	–	–	3,364,776	3,098,622	1,004
Sweden	lb.	–	–	5,942,657	–	–
	$	–	–	1,469,841	–	–
Other countries	lb.	687,649	429,524	2,277,192	2,117,885	1,156,200
	$	112,667	74,724	405,215	351,897	193,178
Total	lb.	**197,177,101**	**514,341,529**	**174,426,999**	**89,649,148**	**10,341,007**
	$	**26,277,271**	**109,605,363**	**40,289,747**	**17,564,887**	**1,798,398**
Beef, pickled and other, cured—						
Belgium	lb.	19,986,803	26,758,655	9,687,576	819,475	525,896
	$	2,022,259	4,508,276	1,936,658	147,632	99,743
Denmark	lb.	30,000	–	1,945,120	500,949	242,300
	$	3,600	–	418,157	83,664	20,084
Germany	lb.	–	–	2,567,542	1,604,050	904,562
	$	–	–	483,191	256,865	101,070
Norway	lb.	2,604,065	–	4,312,960	876,505	3,293,172
	$	326,267	–	799,256	100,916	274,164
Netherlands	lb.	4,986,920	–	2,325,748	1,700,784	223,753
	$	453,215	–	523,292	195,335	23,507
United Kingdom	lb.	7,489,665	3,228,816	5,569,743	4,210,631	3,590,930
	$	1,063,334	755,069	1,317,147	735,397	584,671
Canada	lb.	9,394,712	2,044,979	1,373,553	2,016,022	1,357,975
	$	1,177,374	358,092	176,805	244,227	143,030
Italy	lb.	4,800	1,052,426	3,033,172	430,437	65,048
	$	684	158,514	799,493	86,497	4,696
Newfoundland and Labrador	lb.	6,802,524	5,418,221	5,676,761	5,596,298	6,407,860
	$	834,354	944,444	1,019,972	708,152	549,922
British W. Indies	lb.	1,652,345	944,830	732,386	2,407,272	2,701,287
	$	210,114	161,648	141,465	285,955	266,487
British Guiana	lb.	1,146,700	564,685	792,750	824,861	918,763
	$	150,227	100,504	162,661	106,959	88,295
Dutch Guiana	lb.	749,490	672,200	404,200	1,227,584	1,135,038
	$	96,124	133,279	83,203	166,765	115,667
Other countries	lb.	3,205,643	3,521,208	4,383,213	3,556,308	3,223,998
	$	390,807	801,394	877,571	541,451	312,380
Total	lb.	**58,053,667**	**44,206,020**	**42,804,724**	**25,771,176**	**24,590,582**
	$	**6,728,359**	**7,921,220**	**8,739,141**	**3,659,815**	**2,583,716**
Beef products—						
Oleo oil—						
Canada	lb.	475,952	5,409,619	1,377,794	2,048,289	565,026
	$	85,137	1,307,061	375,638	481,796	68,682
Belgium	lb.	–	–	8,461,473	1,030,628	1,512,145
	$	–	–	2,252,853	206,628	181,958
France	lb.	2,199,170	205,445	4,589,290	437,918	5,345,185
	$	391,141	45,648	1,343,554	93,878	599,692
Greece	lb.	532,219	946,517	3,479,879	2,706,173	2,349,273
	$	68,459	228,809	974,034	670,232	316,407
Switzerland	lb.	95,881	182,641	3,454,606	93,597	202,225
	$	20,377	48,137	895,999	16,133	23,005
Denmark	lb.	2,764,095	30,000	8,025,918	1,531,297	3,172,458
	$	430,716	6,225	2,427,011	321,766	366,659
Germany	lb.	–	–	2,126,704	3,428,958	20,700,512
	$	–	–	688,209	715,479	2,296,516

27.—Quantities and Values of Animal and Agricultural Products Exported from the United States to Principal Countries for the year ended June 30, 1917, and for the calendar years 1918, 1919, 1920 and 1921—con.

Exports by Countries.		June 30.	December 31.			
		1917.	1918.	1919.	1920.	1921.
Beef products—concluded.						
Oleo oil—concluded.						
Netherlands	lb.	8,081,795	–	4,811,612	20,107,202	46,670,711
	$	1,201,373	–	1,367,792	4,390,570	5,094,607
Norway	lb.	15,907,144	–	8,656,192	10,566,827	18,040,180
	$	2,745,117	–	2,620,902	2,389,285	2,220,385
Sweden	lb.	2,247,553	2,240,000	3,494,255	3,320,805	3,783,541
	$	310,078	500,000	1,113,896	755,460	447,029
United Kingdom	lb.	31,761,124	57,783,111	20,791,549	17,593,177	11,543,163
	$	5,316,644	12,782,449	6,113,654	3,913,808	1,378,953
Newfoundland and Labrador	lb.	1,761,149	2,081,016	1,890,493	1,475,586	1,626,440
	$	294,394	520,516	547,878	331,710	228,095
Turkey in Europe	lb.	–	–	2,635,801	6,801,573	9,235,697
	$	–	–	800,803	1,556,259	1,008,275
Turkey in Asia	lb.	–	–	395,088	2,160,125	763,289
	$	–	–	123,883	512,926	109,412
Other countries	lb.	1,284,029	228,001	1,394,510	1,066,189	2,467,868
	$	201,583	54,476	379,234	229,279	278,296
Total	lb.	**67,110,111**	**69,196,350**	**75,585,164**	**74,368,344**	**127,977,713**
	$	**11,065,019**	**15,493,321**	**22,025,340**	**16,585,209**	**14,617,971**
Oleomargarine, imitation butter, **total**	lb.	**5,651,267**	**8,909,108**	**22,939,589**	**16,557,746**	**3,329,049**
	$	**901,659**	**2,398,908**	**6,576,760**	**4,567,120**	**672,327**
Beef tallow—						
Belgium	lb.	–	–	5,478,257	444,200	1,311,776
	$	–	–	912,091	79,402	106,687
France	lb.	1,519,426	2,276,518	10,603,756	998,152	1,557,873
	$	223,263	407,502	1,787,882	177,394	101,274
Netherlands	lb.	–	–	5,606,612	2,492,308	3,037,205
	$	–	–	1,056,305	454,140	228,633
Italy	lb.	1,688,719	133,604	46,344	378,368	253,061
	$	192,686	23,382	8,510	52,724	19,204
United Kingdom	lb.	157,171	23,170	4,663,847	6,308,446	1,937,539
	$	17,831	3,885	667,394	782,788	130,019
Cuba	lb.	1,223,622	975,143	1,983,768	2,498,912	423,011
	$	134,300	158,711	241,018	329,498	23,260
Sweden	lb.	418,067	–	4,573,884	71,860	7
	$	53,203	–	739,932	13,003	1
Other countries	lb.	10,202,364	814,222	5,997,315	7,499,392	5,277,456
	$	1,179,626	152,947	956,980	1,061,726	407,875
Total	lb.	**15,209,369**	**4,222,657**	**38,953,783**	**20,691,638**	**13,797,928**
	$	**1,890,909**	**745,977**	**6,370,112**	**2,950,675**	**1,016,753**
Bacon—						
Austria-Hungary	lb.	–	–	10,368,245	2,929,787[1]	161,973[1]
	$	–	–	3,296,885	621,358[1]	18,422[1]
Belgium	lb.	65,219,598	67,444,015	90,823,427	35,086,345	20,772,504
	$	8,508,658	18,909,533	28,040,950	7,252,773	2,760,470
Denmark	lb.	58,990	–	39,039,883	6,642,344	4,609,561
	$	8,262	–	11,955,295	1,394,863	519,564
France	lb.	77,035,622	98,496,402	178,431,224	25,040,866	12,154,685
	$	12,062,419	27,131,653	50,462,536	5,850,881	1,636,994
Germany	lb.	–	–	53,449,694	76,035,297	54,133,512
	$	–	–	17,370,068	17,112,675	7,311,308
Gibraltar	lb.	539,108	–	5,529,931	777,175	1,079,789
	$	66,910	–	1,725,421	158,771	117,994
Italy	lb.	19,378,346	98,079,060	48,128,149	18,844,911	9,107,503
	$	3,514,652	25,678,054	14,899,875	3,840,134	1,071,051
Netherlands	lb.	10,625,101	–	112,028,898	61,759,267	28,830,301
	$	1,501,376	–	33,836,052	13,046,478	3,708,125
Norway	lb.	8,296,500	–	26,152,222	6,760,290	11,109,890
	$	1,460,095	–	8,200,421	1,558,071	1,560,814
Finland	lb.	–	–	13,700,781	582,125	5,113,650
	$	–	–	4,236,090	109,308	589,768
Sweden	lb.	1,065,440	1,680,601	51,891,124	17,410,673	7,261,939
	$	192,169	345,319	16,286,475	3,919,127	982,210
United Kingdom	lb.	346,758,407	789,253,478	507,184,219	344,555,982	209,551,963
	$	65,192,174	229,883,046	167,505,052	92,403,339	40,512,163

27.—Quantities and Values of Animal and Agricultural Products Exported from the United States to Principal Countries for the year ended June 30, 1917, and for the calendar years 1918, 1919, 1920 and 1921—con.

Exports by Countries.		June 30.	December 31.			
		1917.	1918.	1919.	1920.	1921.
Bacon—concluded.						
Canada	lb.	118,709,847	24,454,474	34,253,197	12,473,768	13,980,969
	$	21,366,115	7,465,376	10,767,992	2,933,683	2,214,903
Cuba	lb.	14,914,902	16,101,208	15,956,981	21,190,518	27,241,037
	$	2,533,943	4,449,579	4,179,328	4,378,657	3,808,969
Other countries	lb.	4,550,111	9,278,843	3,359,519	6,586,224	10,246,876
	$	814,895	2,105,504	1,150,787	1,176,790	1,367,289
Total	lb.	**667,151,972**	**1,104,788,081**	**1,190,297,494**	**636,675,572**	**415,356,152**
	$	**117,221,668**	**315,968,064**	**373,913,227**	**156,296,908**	**68,180,044**
Hams and shoulders, cured—						
Belgium	lb.	–	5,853,423	30,054,740	6,596,959	7,567,604
	$	–	1,387,335	8,899,197	1,390,308	1,077,209
France	lb.	25,863,824	30,336,829	103,201,727	26,209,164	1,398,164
	$	4,226,651	7,829,576	31,447,698	6,900,327	247,937
Netherlands	lb.	547	–	8,569,661	1,589,470	1,902,602
	$	111	–	2,707,214	402,418	284,636
United Kingdom	lb.	217,434,561	470,415,228	338,028,382	116,256,553	194,235,024
	$	40,801,138	127,586,544	109,685,518	31,691,150	40,093,016
Canada	lb.	5,617,090	11,112,784	7,457,307	6,354,128	9,222,358
	$	1,021,892	3,098,318	2,191,013	1,526,333	1,659,982
Panama	lb.	629,807	109,670	270,746	345,113	516,291
	$	132,332	34,855	103,877	128,836	145,305
Cuba	lb.	9,867,826	8,707,061	9,863,103	15,612,342	10,192,526
	$	1,880,230	2,512,966	3,112,929	5,033,220	2,436,288
Austria-Hungary	lb.	–	–	1,935,863	794,376[1]	–
	$	–	–	650,879	170,390[1]	–
Denmark	lb.	–	–	5,282,356	37,822	92,123
	$	–	–	1,718,850	9,669	18,927
Germany	lb.	–	–	7,626,584	2,145,129	161,016
	$	–	–	2,420,958	625,331	25,509
Gibraltar	lb.	1,354	–	6,010,496	12,523	5,702
	$	297	–	2,028,599	4,789	1,233
Italy	lb.	387,277	7,102,044	65,245,793	3,236,225	26,563
	$	84,479	2,078,892	20,080,683	801,498	3,304
Norway	lb.	1,359,854	48	4,358,920	247,502	1,764,723
	$	254,010	17	1,382,235	55,711	251,173
Sweden	lb.	–	603	2,820,714	87,642	26,721
	$	–	257	940,297	24,037	3,894
Other countries	lb.	5,494,441	3,575,351	6,069,271	5,721,807	5,212,380
	$	1,172,901	1,146,128	2,058,890	2,123,571	1,502,007
Total	lb.	**266,655,581**	**537,213,041**	**596,795,663**	**185,246,755**	**232,323,797**
	$	**49,574,041**	**145,674,888**	**189,428,837**	**50,887,588**	**47,750,420**
Lard—						
Belgium	lb.	96,761,185	116,784,152	155,802,228	55,021,415	51,564,655
	$	13,815,450	31,757,658	46,338,651	12,917,017	6,730,480
Denmark	lb.	841,110	75,000	33,505,333	6,329,275	9,506,063
	$	156,441	20,000	11,051,160	1,429,018	1,306,251
France	lb.	54,867,832	35,841,676	96,296,935	48,755,791	40,102,085
	$	10,712,463	9,349,535	27,958,403	13,335,794	4,982,463
Austria-Hungary	lb.	–	–	15,184,232	2,919,490[1]	467,267[1]
	$	–	–	5,206,524	674,692[1]	51,551[1]
Finland	lb.	–	–	2,771,503	462,524	2,773,306
	$	–	–	938,594	125,898	372,530
Gibraltar	lb.	115,975	–	3,867,419	197,122	272,663
	$	21,545	–	1,179,864	50,618	37,834
Switzerland	lb.	–	12,609,344	32,247,743	1,912,574	4,614,346
	$	–	3,898,760	10,245,235	454,567	554,974
Germany	lb.	–	–	39,495,017	127,836,008	278,044,966
	$	–	–	13,990,079	28,785,385	35,456,404
Italy	lb.	4,981,846	1,145,112	2,463,197	23,153,676	11,744,562
	$	1,058,998	273,258	806,057	5,334,923	1,512,208
Netherlands	lb.	20,446,110	–	68,596,924	91,297,867	76,964,941
	$	2,838,460	–	22,377,490	21,212,245	10,917,382
Norway	lb.	1,888,539	1,020	1,257,190	1,018,106	1,578,772
	$	327,776	275	393,627	262,125	207,478
Sweden	lb.	260,170	560,295	24,483,937	5,000,274	5,591,622
	$	38,429	174,098	8,645,694	1,177,049	740,869

[1]Austria only.

27.—Quantities and Values of Animal and Agricultural Products Exported from the United States to Principal Countries for the year ended June 30, 1917, and for the calendar years 1918, 1919, 1920 and 1921—con.

Exports by Countries.		June 30.	December 31.			
		1917.	1918.	1919.	1920.	1921.
Lard—concluded.						
United Kingdom	lb.	178,110,633	309,987,044	219,306,542	128,771,843	232,204,210
	$	32,616,184	78,985,740	68,323,623	29,002,972	29,562,370
Canada	lb.	5,375,768	2,478,926	5,090,459	12,730,298	12,706,087
	$	984,930	669,571	1,454,658	2,630,226	1,368,352
Central American States	lb.	2,658,120	334,889	227,169	861,422	1,303,733
	$	453,596	95,559	72,605	209,192	181,802
Mexico	lb.	13,261,559	15,452,095	7,134,448	17,302,006	43,457,727
	$	2,270,025	4,451,219	2,127,709	4,000,496	5,652,767
Cuba	lb.	48,732,924	46,008,414	44,766,460	65,720,975	72,310,640
	$	8,819,512	13,044,755	14,111,770	15,907,936	9,650,327
Ecuador	lb.	3,842,692	1,339,946	2,407,180	2,897,992	2,951,759
	$	686,141	418,727	824,444	680,464	382,854
Other countries	lb.	12,525,077	6,200,988	5,997,695	20,061,293	20,782,165
	$	2,208,963	793,996	1,937,259	5,180,824	2,864,125
Total	lb.	**444,769,540**	**548,817,901**	**760,901,611**	**612,249,951**	**868,941,569**
	$	**77,008,913**	**144,933,151**	**237,983,449**	**143,371,441**	**112,532,841**
Lard, neutral—						
Denmark	lb.	1,022,499	–	5,445,681	497,480	1,268,352
	$	171,136	–	1,781,589	119,197	178,263
Germany	lb.	–	–	950,837	118,584	2,461,822
	$	–	–	367,789	37,610	333,191
Netherlands	lb.	2,657,914	–	9,313,883	2,998,410	8,524,085
	$	432,566	–	3,169,227	755,581	1,167,362
Norway	lb.	3,234,094	–	1,653,325	1,885,917	3,891,235
	$	594,283	–	541,719	504,596	553,285
Sweden	lb.	275,423	–	1,472,806	1,064,260	981,255
	$	40,935	–	470,401	297,730	147,151
United Kingdom	lb.	8,627,547	5,433,851	2,000,074	14,255,712	4,808,132
	$	1,615,051	1,364,634	715,891	3,486,755	773,264
Other countries	lb.	1,758,763	873,313	2,120,531	2,417,708	2,015,908
	$	314,118	248,146	678,767	604,573	285,543
Total	lb.	**17,576,240**	**6,307,164**	**22,957,137**	**23,238,071**	**23,950,789**
	$	**3,168,089**	**1,612,780**	**7,725,983**	**5,806,042**	**3,438,059**
Pork, canned—						
France	lb.	1,103,011	2,312,844	1,011,205	98,649	–
	$	304,305	632,565	372,424	25,617	–
United Kingdom	lb.	3,354,628	1,994,851	3,068,054	1,209,065	966,141
	$	1,003,834	787,892	1,461,563	580,953	292,366
Other countries	lb.	1,438,487	959,647	1,712,447	494,527	183,941
	$	337,466	355,935	588,377	145,550	52,429
Total	lb.	**5,896,126**	**5,267,342**	**5,791,706**	**1,802,241**	**1,150,082**
	$	**1,645,695**	**1,776,392**	**2,422,364**	**752,120**	**344,795**
Pork, fresh—						
France	lb.	919,724	433,301	2,019,460	1,280,610	5,625
	$	120,397	120,541	749,455	322,204	394
United Kingdom	lb.	23,787,556	9,500,417	1,197,244	19,404,504	17,039,598
	$	3,649,482	2,412,536	267,000	4,627,126	3,191,168
Canada	lb.	24,832,531	1,084,932	21,905,577	12,717,549	23,915,301
	$	4,944,891	222,969	6,897,596	2,797,146	3,651,455
Germany	lb.	–	–	–	3,069,949	12,462,623
	$	–	–	–	896,511	2,001,953
Other countries	lb.	895,804	613,985	1,654,697	1,832,624	2,660,116
	$	161,119	151,848	433,506	447,476	491,557
Total	lb.	**50,435,615**	**11,632,635**	**26,776,978**	**38,305,236**	**56,083,263**
	$	**8,875,889**	**2,907,894**	**8,347,557**	**9,090,463**	**9,336,527**
Pork, pickled—						
France	lb.	829,354	302,254	605,398	660,187	144,572
	$	126,465	76,012	140,585	134,555	23,489
United Kingdom	lb.	6,058,672	2,102,744	3,378,871	1,902,869	4,031,010
	$	929,881	616,636	963,487	410,054	663,611
Canada	lb.	16,929,411	14,708,735	8,372,796	15,480,971	11,753,367
	$	2,501,890	3,355,902	2,179,707	3,032,780	1,508,392
Newfoundland and Labrador	lb.	6,262,085	6,303,799	4,833,214	4,848,954	4,577,400
	$	907,594	1,284,733	1,089,045	952,980	510,314

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Exports by Countries.		June 30.	December 31.			
		1917.	1918.	1919.	1920.	1921.
Pork, pickled—concluded.						
British West Indies	lb.	3,542,166	1,887,313	1,026,405	2,251,061	2,295,530
	$	513,271	438,819	261,074	433,955	275,480
Cuba	lb.	7,700,421	7,659,439	6,560,984	4,775,388	1,375,787
	$	1,145,958	1,893,101	1,702,245	1,082,474	213,241
British Guiana	lb.	1,083,300	1,040,430	205,700	901,185	614,975
	$	164,997	237,410	46,324	180,715	72,793
Belgium	lb.	163,121	25,295	1,496,050	616,760	651,921
	$	23,878	5,439	337,786	114,991	86,116
Norway	lb.	324,556	200	3,193,955	616,062	1,087,782
	$	49,485	50	816,452	138,875	164,826
Netherlands	lb.	–	–	1,345,353	1,224,444	214,968
	$	–	–	271,052	169,552	22,907
Other countries	lb.	4,099,635	2,641,451	3,095,149	5,430,960	6,095,295
	$	577,887	626,915	824,761	1,019,093	674,629
Total	lb.	**46,992,721**	**36,671,666**	**34,113,875**	**38,708,841**	**32,842,607**
	$	**6,941,306**	**8,535,017**	**8,632,518**	**7,670,024**	**4,215,798**
Lard compounds, etc.—						
Norway	lb.	1,360,285	–	2,703,928	1,484,598	1,671,376
	$	244,069	–	728,050	300,932	181,472
United Kingdom	lb.	13,507,936	4,345,867	62,739,201	4,008,562	7,375,760
	$	1,947,989	995,934	15,795,065	790,657	737,208
Cuba	lb.	14,164,676	8,608,425	8,611,137	6,918,046	8,115,534
	$	2,203,477	2,054,469	2,333,358	1,601,336	981,867
Panama	lb.	190,320	353,087	414,197	450,309	731,178
	$	304,051	84,090	112,630	105,259	84,520
Hayti	lb.	1,498,965	223,780	1,603,608	2,126,471	2,412,364
	$	246,101	59,773	432,763	564,451	335,459
Philippine Islands	lb.	375,925	257,099	247,033	341,133	307,939
	$	60,326	68,975	69,380	97,325	53,066
Mexico	lb.	6,863,487	6,886,888	4,620,050	6,217,160	10,212,860
	$	1,011,210	1,654,381	1,230,234	1,328,533	1,183,870
Belgium	lb.	5,809,610	14,379,164	22,644,891	451,510	38,331
	$	723,877	3,347,502	5,300,526	149,218	4,810
Gibraltar	lb.	2,810	–	9,319,915	8,400	–
	$	408	–	2,318,564	2,310	–
British West Indies	lb.	3,863,594	2,187,574	2,727,296	2,932,641	3,390,545
	$	558,138	536,632	708,582	683,685	385,804
Germany	lb.	–	–	1,228,942	1,746,998	5,029,116
	$	–	–	368,330	338,699	552,430
Poland and Danzig	lb.	–	–	–	180,258	3,816,530
	$	–	–	–	43,131	401,978
Other countries	lb.	6,721,885	6,735,528	8,102,751	5,185,378	5,105,050
	$	970,207	1,456,780	2,208,403	1,213,339	646,447
Total	lb.	**56,359,493**	**43,977,410**	**124,962,950**	**32,051,458**	**48,206,583**
	$	**8,269,844**	**10,258,536**	**31,605,885**	**7,218,845**	**5,548,931**
Mutton—						
United Kingdom	lb.	177,443	87,744	24,122	176,326	3,609,156
	$	25,739	22,967	8,697	40,179	635,707
Canada	lb.	2,449,497	1,368,497	2,594,402	1,818,988	3,215,426
	$	351,293	319,568	529,050	395,593	508,723
Other countries	lb.	568,636	174,574	390,640	1,580,095	690,856
	$	104,494	44,597	94,920	322,754	110,551
Total	lb.	**3,195,576**	**1,630,815**	**3,009,164**	**3,575,409**	**7,515,438**
	$	**481,526**	**387,132**	**632,667**	**758,526**	**1,254,981**
Poultry and game—						
United Kingdom	$	1,134,206	790,091	4,328,896	444,299	714,244
Canada	$	73,097	19,589	47,914	11,164	44,147
Other countries	$	120,045	125,368	183,468	301,285	298,908
Total	$	**1,327,348**	**935,048**	**4,560,278**	**756,748**	**1,057,299**
Sausages, canned—						
France	lb.	622,725	86,272	1,409,553	769,544	392,420
	$	155,943	26,044	646,912	327,197	144,536
Italy	lb.	–	44,213	200	49,533	770
	$	–	14,131	110	26,445	155

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Exports by Countries.		June 30.	December 31.			
		1917.	1918.	1919.	1920.	1921.
Sausages, canned—concluded.						
United Kingdom	lb.	1,516,008	2,666,046	2,267,506	120,061	43,886
	$	358,971	719,574	740,076	39,134	12,773
Cuba	lb.	3,052,050	2,419,947	2,437,961	4,200,420	1,061,475
	$	549,803	686,926	662,910	1,295,699	406,565
Other countries	lb.	1,104,161	1,133,124	2,083,116	2,018,733	1,057,540
	$	251,603	370,524	711,936	656,209	310,473
Total	lb.	**6,294,950**	**6,349,60.**	**8,198,336**	**7,158,291**	**2,556,091**
	$	**1,316,320**	**1,817,198**	**2,761,944**	**2,344,684**	**874,502**
Sausage, all other—						
Belgium	lb.	–	–	1,784,024	611,910	923,182
	$	–	–	737,628	214,550	250,678
France	lb.	5,785,905	3,619,171	7,744,982	4,743,643	2,543,603
	$	1,685,424	1,324,069	3,468,765	1,969,405	917,074
Canada	lb.	589,115	240,867	332,856	272,634	353,097
	$	145,835	87,707	133,052	97,867	109,840
Cuba	lb.	984,724	1,466,584	1,219,154	2,959,714	1,371,668
	$	210,430	491,042	475,983	1,178,823	501,478
Other countries	lb.	1,774,727	702,732	2,808,219	1,921,194	1,160,581
	$	399,821	222,555	1,096,422	726,929	2,116,242
Total	lb.	**9,134,471**	**6,029,354**	**13,889,285**	**10,509,095**	**6,352,131**
	$	**2,441,516**	**2,125,373**	**5,911,850**	**4,187,574**	**2,116,242**
Sausage casings—						
Belgium	lb.	–	–	1,177,174	921,597	1,410,020
	$	–	–	213,800	132,688	232,581
Canada	lb.	340,067	847,724	1,262,494	300,528	264,015
	$	190,317	572,294	450,205	223,271	155,664
Switzerland	lb.	–	85,704	630,394	141,833	123,716
	$	–	79,023	203,894	42,293	22,184
Denmark	lb.	14,960	–	2,195,758	972,360	293,308
	$	2,992	–	257,983	154,108	74,155
France	lb.	1,993,491	288,503	1,503,512	1,172,235	1,568,441
	$	557,465	121,226	505,763	238,688	221,283
Germany	lb.	–	–	4,484,173	8,462,441	16,011,279
	$	–	–	506,125	953,852	1,999,444
Netherlands	lb.	2,695	–	5,641,052	4,566,985	2,547,333
	$	1,291	–	659,067	423,802	301,453
Spain	lb.	1,605,435	704,830	2,410,091	2,325,917	2,386,917
	$	249,818	284,929	452,898	479,287	387,464
Sweden	lb.	27,500	–	912,238	603,118	605,507
	$	4,745	–	93,059	81,055	79,645
United Kingdom	lb.	590,871	1,040,290	3,396,378	2,489,453	3,293,468
	$	194,768	945,714	2,821,196	1,669,582	1,793,119
Australia	lb.	812,098	605,593	314,820	1,026,690	1,114,147
	$	311,170	373,456	267,091	697,801	570,970
New Zealand	lb.	279,388	186,783	141,889	569,813	234,732
	$	119,898	124,092	135,481	363,661	137,291
Other countries	lb.	451,555	277,894	407,055	1,685,217	1,668,304
	$	109,495	110,946	243,273	400,847	268,805
Total	lb.	**6,118,060**	**4,037,391**	**25,477,028**	**25,238,187**	**31,521,187**
	$	**1,741,959**	**2,611,680**	**6,809,834**	**5,860,935**	**6,243,992**
Stearine from animal fats—						
Belgium	lb.	–	–	2,111,081	509,623	680,174
	$	–	–	278,537	83,159	51,800
Denmark	lb.	568,202	–	1,413,474	155,442	1,369,176
	$	89,614	–	287,634	30,410	127,932
France	lb.	1,549,911	63,791	3,007,986	320,600	4,677,018
	$	215,817	13,893	540,507	52,720	518,562
Netherlands	lb.	77,571	–	3,197,373	3,366,512	7,375,330
	$	9,622	–	612,331	546,692	704,770
United Kingdom	lb.	1,755,909	866,448	3,907,895	1,410,672	3,718,774
	$	242,192	173,048	810,694	257,103	340,952
Canada	lb.	2,349,021	2,917,406	1,020,773	3,500,969	2,729,800
	$	317,582	542,470	209,825	573,288	224,225
Cuba	lb.	1,639,684	1,766,199	1,213,865	2,131,584	876,419
	$	241,110	380,005	254,002	420,907	102,707

27.—Quantities and Values of Animal and Agricultural Products Exported from the United States to Principal Countries for the year ended June 30, 1917, and for the calendar years 1918, 1919, 1920 and 1921—con.

Exports by Countries.		June 30.	December 31.			
		1917.	1918.	1919.	1920.	1921.
Stearine from animal fats—concluded.						
Other countries	lb.	4,996,059	4,936,397	4,982,277	6,117,576	11,269,733
	$	682,380	1,181,744	1,177,621	1,523,299	1,193,332
Total	lb.	**12,936,357**	**10,550,241**	**20,854,724**	**17,512,978**	**32,696,424**
	$	**1,798,317**	**2,291,160**	**4,171,151**	**3,487,578**	**3,264,280**
All other meat products, canned—						
Belgium	$	–	17,265	578,720	16,684	18,464
France	$	691,438	1,531,396	1,944,271	24,002	27,427
Italy	$	58,370	2,943,356	1,118,294	1,616	353
United Kingdom	$	2,531,862	3,557,096	7,729,010	4,628,383	3,683,944
Canada	$	399,203	112,137	187,920	135,089	119,397
Other countries	$	639,779	658,746	1,392,454	1,674,502	1,158,715
Total	$	**4,320,652**	**8,819,996**	**12,950,669**	**6,480,276**	**5,008,300**
All other meat products—						
France	$	197,287	1,432,273	1,598,498	241,126	32,248
Italy	$	35,081	313,274	1,410,235	49,917	26,813
United Kingdom	$	2,124,183	3,455,205	4,104,343	1,999,281	2,297,173
Canada	$	702,151	388,410	526,817	517,448	196,171
Panama	$	74,188	60,707	126,500	112,165	120,600
Belgium	$	–	10,166	385,749	40,701	59,574
Denmark	$	7,365	–	221,668	408,814	108,310
Germany	$	–	–	218,764	1,211,024	855,850
Gibraltar	$	51,306	–	399,903	42,702	42,702
Netherlands	$	6,159	–	424,472	1,152,364	506,431
Sweden	$	–	–	981,141	35,967	37,999
Other countries	$	762,852	1,283,657	1,244,522	1,358,080	797,203
Total	$	**3,960,572**	**6,913,692**	**11,642,612**	**7,169,589**	**5,081,074**
Butter—						
United Kingdom	lb.	20,839,583	22,250,115	21,817,613	3,898,845	65,168
	$	6,075,608	9,105,373	10,682,229	2,175,922	24,757
Bermuda	lb.	325,829	144,626	52,693	48,137	75,411
	$	112,602	60,259	27,543	28,357	35,825
Canada	lb.	1,323,653	12,518	274,893	855,150	1,907,184
	$	425,314	5,110	160,802	505,443	679,675
Panama	lb.	573,580	422,334	471,812	565,274	713,978
	$	214,683	216,156	284,589	355,919	315,598
Hayti	lb.	443,430	423,530	364,410	552,700	429,005
	$	105,660	140,308	153,737	216,427	135,179
Mexico	lb.	558,369	313,615	429,608	798,596	1,121,874
	$	208,254	166,501	273,205	555,124	572,469
Netherlands	lb.	–	–	481,538	319,666	439
	$	–	–	250,492	179,878	215
Belgium	lb.	–	40,000	2,856,293	5,214,778	–
	$	–	27,800	1,481,416	3,030,979	–
Denmark	lo.	–	–	1,033,096	2,558	–
	$	–	–	505,546	835	–
France	lb.	88,802	79,948	778,154	701,042	–
	$	39,129	41,070	437,940	413,223	–
Norway	lb.	21,000	4,824	1,367,982	450	–
	$	5,000	2,787	629,119	225	–
Italy	lb.	2,606	57,777	1,075,128	220,650	514
	$	1,202	28,481	569,918	152,252	306
Other countries	lb.	2,658,240	2,445,128	3,553,265	4,309,889	3,701,164
	$	931,718	1,075,108	2,047,910	2,527,819	1,505,585
Total	lb.	**26,835,092**	**26,194,415**	**34,556,485**	**17,487,735**	**8,014,737**
	$	**8,749,170**	**10,868,953**	**17,504,446**	**10,142,403**	**3,269,609**
Cheese—						
United Kingdom	lb.	55,399,101	38,967,953	585,823	5,233,407	3,492,751
	$	12,820,197	8,815,236	163,578	1,138,132	629,392
Canada	lb.	6,247,702	247,127	282,958	841,647	1,866,413
	$	1,309,194	71,310	125,154	296,448	350,291
Panama	lb.	350,837	289,682	173,309	316,405	399,023
	$	79,822	96,679	59,843	102,096	100,936
Cuba	lb.	1,406,606	3,121,445	2,348,575	2,875,070	1,562,264
	$	357,204	964,198	814,423	1,006,199	489,831

27.—Quantities and Values of Animal and Agricultural Products Exported from the United States to Principal Countries for the year ended June 30, 1917, and for the calendar years 1918, 1919, 1920 and 1921—con.

Exports by Countries.		June 30.	December 31.			
		1917.	1918.	1919.	1920.	1921.
Cheese—concluded.						
Belgium	lb.	–	203,426	1,197,176	571,287	118,601
	$	–	64,133	446,562	197,606	35,957
Denmark	lb.	–	–	1,206,852	149,658	119,344
	$	–	–	415,318	43,798	24,922
France	lb.	4,136	1,847,880	639,407	18,862	87,366
	$	1,018	494,307	306,152	6,173	23,293
Norway	lb.	45,821	15,195	3,291,655	535,645	51,950
	$	9,513	4,131	1,241,567	201,005	13,081
Sweden	lb.	15,484	539	1,406,371	1,427,874	558,508
	$	3,953	191	586,525	451,305	109,170
Mexico	lb.	802,876	858,444	918,521	1,181,528	1,567,852
	$	217,070	293,712	344,351	401,126	386,689
Other countries	lb.	1,777,450	2,852,981	2,109,074	3,140,146	1,947,899
	$	442,062	931,369	846,104	1,201,365	552,696
Total	lb.	**66,050,013**	**48,404,672**	**14,459,721**	**16,291,529**	**11,771,971**
	$	**15,240,033**	**11,735,266**	**5,349,577**	**5,054,253**	**2,716,258**
Milk, condensed and evaporated[1]—						
Canada	lb.	1,318,033	11,340,919	4,578,983	2,243,827	110,610
	$	128,942	1,567,823	661,453	375,158	14,259
Austria-Hungary	lb.	–	–	10,444,819	1,023,700[2]	35,009[2]
	$	–	–	1,416,445	189,106[2]	6,500[2]
Germany	lb.	–	–	13,068,494	28,582,257	56,420,778
	$	–	–	1,953,491	4,376,538	5,790,318
Gibraltar	lb.	929,583	9,552,897	39,467,731	2,113,256	878,594
	$	112,895	1,144,234	5,130,223	324,708	155,068
Italy	lb.	390,788	26,557,402	10,475,590	4,130,643	264,439
	$	39,647	4,038,680	1,526,549	503,350	30,331
Norway	lb.	108	530	8,625,216	1,126,561	117,000
	$	12	66	1,068,596	126,375	9,740
Sweden	lb.	–	1,654	10,233,562	312,442	92,600
	$	–	249	1,667,264	51,086	8,725
Switzerland	lb.	92,000	91,945	18,746,372	1,459,444	–
	$	10,950	13,253	2,408,537	224,084	–
British India	lb.	7,049,194	34,371,600	10,130,675	12,491,128	2,871,798
	$	587,150	4,808,363	1,212,213	1,749,532	406,843
Straits Settlements	lb.	5,425,284	5,863,190	6,444,295	8,723,888	4,002,848
	$	631,972	947,741	908,881	1,325,129	490,543
Belgium	lb.	25,153,971	45,504,596	61,596,636	17,943,347	8,548,819
	$	1,847,909	6,353,820	9,329,764	2,804,296	908,029
China	lb.	4,495,800	2,369,049	5,555,679	4,481,405	4,697,148
	$	497,663	393,485	800,455	721,887	703,908
France	lb.	30,263,356	40,942,488	114,818,165	58,833,303	19,028,047
	$	3,580,696	5,075,594	16,903,612	8,048,370	1,956,564
Netherlands	lb.	12,850,724	–	11,821,267	5,623,693	4,411,426
	$	1,258,169	–	1,853,052	872,145	535,710
United Kingdom	lb.	91,330,504	268,879,340	420,928,450	123,528,070	72,108,109
	$	8,096,387	33,338,459	59,849,249	20,414,760	8,641,425
Panama	lb.	6,497,772	2,443,751	3,599,564	4,488,260	5,052,983
	$	698,625	328,054	511,248	663,866	638,535
Mexico	lb.	4,526,742	4,142,818	2,946,455	7,982,170	6,322,028
	$	531,981	606,804	436,636	1,202,959	891,391
Cuba	lb.	30,723,758	31,759,473	33,461,993	50,430,447	33,260,051
	$	3,164,657	4,893,689	4,899,391	8,146,333	5,886,684
Hong Kong	lb.	5,801,270	4,937,745	2,269,288	3,304,846	3,459,849
	$	576,708	866,856	333,906	528,108	593,876
Japan	lb.	4,221,372	3,735,838	4,123,127	5,048,340	5,063,916
	$	472,271	634,137	647,936	837,604	969,694
Philippine Islands	lb.	7,729,034	8,039,055	14,085,937	12,463,085	11,586,318
	$	692,169	1,102,047	1,892,725	1,773,712	1,802,547
Poland and Danzig	lb.	–	–	–	17,604,055	27,538,768
	$	–	–	–	2,863,203	2,735,774
Other countries	lb.	20,341,938	50,605,464	45,443,116	37,139,815	23,853,682
	$	2,207,838	6,711,543	6,481,721	5,756,957	3,064,940
Total	lb.	**259,141,231**	**551,139,754**	**852,865,414**	**411,077,982**	**289,724,820**
	$	**25,136,641**	**72,824,897**	**121,893,337**	**64,239,266**	**36,241,364**
Milk, all other, including cream, **total**	$	**253,629**	**528,607**	**1,729,884**	**1,381,380**	**1,918,518**

[1] Includes "powdered" prior to 1920.

[2] Austria only.

27.—Quantities and Values of Animal and Agricultural Products Exported from the United States to Principal Countries for the year ended June 30, 1917, and for the calendar years 1918, 1919, 1920 and 1921—con.

Exports by Countries.		June 30.	December 31.			
		1917.	1918.	1919.	1920.	1921.
Oil cake and oil-cake meal, linseed and flaxseed[1]—						
Canada	lb.	6,384,269	29,597,736	4,897,344	3,372,125	7,249,616
	$	125,749	768,449	145,992	100,953	140,999
Norway	lb.	8,834,584	30,797,280	–	–	1,000
	$	177,538	769,258	–	–	45
Germany	lb.	–	–	–	16,762,236	32,878,887
	$	–	–	–	516,500	861,205
Sweden	lb.	60,500	–	20,249,230	–	–
	$	1,018	–	559,192	–	–
Belgium	lb.	–	–	80,622,811	25,904,744	120,571,354
	$	–	–	2,876,246	865,223	2,532,949
Denmark	lb.	130,434,093	–	46,023,678	42,135,337	–
	$	2,352,952	–	1,589,583	1,626,455	–
France	lb.	4,408,251	–	263,503	–	4,945,889
	$	93,426	–	5,951	–	111,084
Netherlands	lb.	292,984,477	–	104,614,268	98,188,316	336,577,625
	$	5,596,874	–	3,832,858	3,266,190	7,751,706
United Kingdom	lb.	86,400,787	15,422,381	84,678,808	42,425,875	58,250,194
	$	1,737,283	423,494	3,087,412	1,424,329	1,250,141
Other countries	lb.	7,477,433	10,136,985	12,401,841	6,835,344	1,792,475
	$	167,676	288,070	405,997	243,050	41,365
Total	lb.	**535,984,394**	**85,954,382**	**353,751,483**	**235,624,977**	**562,267,040**
	$	**10,252,519**	**2,249,271**	**12,593,231**	**8,042,700**	**12,689,544**
Seeds, grass—clover—						
United Kingdom	lb.	2,168,921	3,324,689	3,564,730	1,741,250	1,446,713
	$	390,773	1,019,593	1,576,313	569,811	278,518
Denmark	lb.	534,913	–	2,170,528	959,987	88,068
	$	101,855	–	696,693	447,127	30,215
Canada	lb.	1,918,005	2,223,744	1,734,139	1,351,275	3,539,684
	$	361,772	696,605	791,018	649,563	712,454
Other countries	lb.	1,265,054	437,093	474,352	933,183	660,289
	$	238,115	119,926	142,292	261,639	125,260
Total	lb.	**5,886,893**	**5,985,526**	**7,943,749**	**4,985,695**	**5,734,754**
	$	**1,092,515**	**1,836,124**	**3,296,316**	**1,928,140**	**1,146,447**
Seeds, grass—timothy—						
Denmark	lb.	493,405	348,900	2,019,380	458,012	1,443,232
	$	42,408	29,549	272,470	50,372	121,146
Norway	lb.	–	394,760	1,379,265	220,211	360,273
	$	–	43,240	168,406	20,017	31,819
United Kingdom	lb.	3,020,241	1,118,961	2,061,849	2,875,019	2,712,735
	$	194,895	119,732	253,751	344,075	190,255
Canada	lb.	11,196,094	6,280,498	7,489,175	8,569,337	13,721,843
	$	666,328	638,271	892,071	1,092,524	915,012
Other countries	lb.	430,173	421,265	396,689	1,399,555	1,664,362
	$	34,189	50,362	46,573	159,344	126,380
Total	lb.	**15,139,913**	**8,564,384**	**13,346,358**	**13,522,134**	**19,901,945**
	$	**937,820**	**881,154**	**1,633,271**	**1,666,332**	**1,384,612**
Other grass seeds—						
United Kingdom	lb.	1,159,988	890,771	1,856,228	1,178,246	1,101,255
	$	128,079	225,301	299,750	243,251	248,251
Canada	lb.	2,282,433	1,488,335	1,567,318	1,322,426	2,626,432
	$	194,148	185,385	207,242	209,494	270,209
Other countries	lb.	2,223,626	573,087	1,016,944	1,751,480	1,440,872
	$	378,874	132,018	210,110	360,056	325,790
Total	lb.	**5,666,047**	**2,952,193**	**4,440,490**	**4,252,152**	**5,171,563**
	$	**701,101**	**542,704**	**717,102**	**812,801**	**844,259**

[1]Oil cake and oil-cake meal only in 1918, 1919, 1920 and 1921.

27.—Quantities and Values of Animal and Agricultural Products Exported from the United States to Principal Countries for the year ended June 30, 1917, and for the calendar years 1918, 1919, 1920 and 1921—concluded.

Exports by Countries.	June 30.	December 31.			
	1917.	1918.	1919.	1920.	1921.
Potatoes—					
Canada.....bush.	574,190	781,574	610,622	856,430	453,614
$	610,648	766,915	885,550	1,708,439	469,391
Panama.....bush.	154,268	76,287	60,647	77,247	154,704
$	290,946	122,819	119,099	235,498	222,656
Mexico.....bush.	179,731	352,274	315,523	287,191	294,811
$	335,423	453,441	470,143	551,436	347,934
Cuba.....bush.	1,278,148	2,396,550	2,325,097	2,679,684	2,391,576
$	1,815,705	4,113,877	4,394,344	7,151,772	3,396,559
Argentina.....bush.	6,750	2,970	2,200	1,108	12
$	13,475	5,740	5,000	2,365	21
Brazil.....bush.	69,789	10,994	238,723	7,071	1,034
$	125,329	21,868	53,409	19,577	1,253
Other countries.....bush.	226,125	232,538	304,510	244,834	154,087
$	322,853	349,689	547,658	530,841	282,549
Total.....bush.	**2,489,001**	**3,853,187**	**3,642,322**	**4,153,565**	**3,499,838**
$	**3,514,379**	**5,834,349**	**6,475,203**	**10,199,928**	**4,720,363**
Vegetables, canned—					
France.....$	51,523	6,324,482	838,600	15,579	31,045
United Kingdom.....$	1,667,265	3,463,795	5,449,395	680,585	546,342
Canada.....$	1,214,766	896,211	1,713,022	1,566,330	1,098,803
Panama.....$	228,845	53,821	111,829	139,394	125,436
Cuba.....$	424,483	217,511	1,024,804	1,385,549	360,774
Australia.....$	106,353	254,693	107,736	247,494	108,692
Philippine Islands.....$	100,934	174,418	217,624	320,063	96,962
Other countries.....$	970,917	1,034,588	1,892,381	1,985,365	1,060,139
Total.....$	**4,765,133**	**12,419,519**	**11,355,391**	**6,340,359**	**3,428,193**
Vegetables—					
Beans and dried peas—					
Belgium.....bush	346,766	1,521,854	242,796	20,528	583
$	1,418,374	9,013,291	1,309,778	83,672	1,400
France.....bush.	13,750	280,394	1,055,506	17,844	2,034
$	71,161	1,636,781	5,973,316	86,092	10,917
Gibraltar.....bush.	–	46	199,801	–	–
$	–	205	1,126,487	–	–
Italy.....bush.	–	82,676	166,393	1,714	650
$	–	491,195	957,693	9,673	2,044
Norway.....bush.	66,787	5,369	86,086	17,263	11,339
$	293,241	32,643	425,280	91,916	40,839
Netherlands.....bush.	246,920	–	8,008	57,116	17
$	1,178,657	–	25,244	202,836	50
United Kingdom.....bush.	331,850	69,277	1,573,241	40,803	28,779
$	1,509,394	422,317	8,454,529	319,733	170,752
Canada.....bush.	531,972	57,859	68,719	99,438	58,948
$	2,926,035	349,910	336,762	409,785	205,699
Cuba.....bush.	450,603	534,521	541,758	915,949	934,518
$	2,186,218	3,035,365	2,414,582	4,398,648	3,648,937
Germany.....bush.	–	–	23,305	298,010	107,172
$	–	–	88,296	1,201,664	226,765
Poland and Danzig.....bush.	–	–	–	400,627	199,935
$	–	–	–	1,378,476	418,013
Other countries.....bush.	176,295	169,316	305,913	191,122	190,393
$	839,662	934,027	1,518,281	905,274	656,591
Total.....bush.	**2,164,943**	**2,721,306**	**4,271,526**	**2,060,414**	**1,534,368**
$	**10,427,742**	**15,915,734**	**22,639,248**	**9,087,769**	**5,382,007**

II.—INTERNAL TRADE.

1.—Interprovincial Trade.

A monthly traffic report of the railways of Canada is published by the Transportation Branch of the Dominion Bureau of Statistics, showing for each province and for the Dominion as a whole, the total revenue freight traffic of all railways, divided into 70 classes of commodities. The data also show the quantity of each class that originated and terminated in each province. The reports are of use in computing the imports and exports of each province for each of the 70 classes of commodities. For example, if the total wheat unloaded in Alberta during 1922, as shown in Table 28, is deducted from the loaded wheat the remainder of 1,620,013 tons represents the net exports of wheat from Alberta for the year 1922. The comparative figure for 1921 was 1,258,568 tons. Similarly, the net exports of wheat from Saskatchewan in 1922 were 5,441,942 tons as compared with 3,759,257 tons in 1921. These statistics show rail traffic only, a limitation which should be borne in mind in connection with the trade of provinces favoured with facilities for water transportation.

Statements similar to that of wheat (Table 28) may thus be compiled for any of the 70 commodities for which statistics are collected, showing the interprovincial trade by rail in such commodities.

28.—Railway Traffic Movement of Wheat in Canada and its Provinces, in tons, for the calendar years 1921 and 1922.

Provinces.	Originating in Canada or specified province.		Received for foreign connections.		Total freight carried.	
	1921.	1922.	1921.	1922.	1921.	1922.
Prince Edward Island	239	132	–	–	239	132
Nova Scotia	198	85	–	–	198	85
New Brunswick	181	376	–	–	181	376
Quebec	52,887	19,541	2,050	1,875	54,937	21,416
Ontario	2,636,044	2,951,098	287,180	231,016	2,923,224	3,182,114
Manitoba	1,297,584	1,900,618	358	404	1,297,942	1,901,022
Saskatchewan	4,248,659	5,676,441	–	121	4,248,659	5,676,562
Alberta	1,539,449	2,032,329	30	2,670	1,539,479	2,034,999
British Columbia	13,078	6,889	2,521	2,154	15,599	9,043
Canada	**9,788,319**	**12,587,509**	**292,139**	**238,240**	**10,080,458**	**12,825,749**

Provinces.	Terminating in Canada or specified province.		Delivered to foreign connections.		Total freight terminating.	
	1921.	1922.	1921.	1922.	1921.	1922.
Prince Edward Island	502	683	–	–	502	683
Nova Scotia	1,023	1,443	709	–	1,732	1,443
New Brunswick	497	470	232,016	216,401	232,513	216,871
Quebec	394,418	538,127	1,067,698	1,108,779	1,462,116	1,646,906
Ontario	6,557,530	8,572,870	416,956	378,033	6,974,486	8,950,903
Manitoba	582,519	548,055	103,610	52,064	686,129	601,119
Saskatchewan	345,244	233,637	144,158	983	489,402	234,620
Alberta	244,509	414,953	36,402	33	280,911	414,986
British Columbia	67,494	187,717	33,174	258,253	100,668	445,970
Canada	**8,193,736**	**10,497,955**	**2,034,723**	**2,015,546**	**10,228,459**	**12,513,501**

2.—Grain Trade Statistics.

Tables 29 to 33 give the principal statistics relating to the storage, inspection, grading and shipment of Canadian grain, the trade in which is regulated by the Dominion Government under The Canada Grain Act, 1912 (2 Geo. V, c. 27)[1]. Probably no country in the world possesses a system for the sale and shipment of its grain products so complete and elaborate as is that of Canada. In this system the grain elevator plays an important part. Few grain growers, especially in the prairie provinces, have anything like adequate storage facilities, and the grain, as produced, is moved through a series of public elevators and warehouses, as well as over loading platforms, until finally placed in the holds of ocean-going vessels. For the calendar year ended December, 1923, the total storage capacity of the 4,020 grain elevators and warehouses in Canada was 238,107,420 bushels, these figures being comparable with a total of 523 elevators and warehouses having a capacity of 18,329,352 bushels in 1901.

Shipment of Canadian Grain.—For the purposes of grain shipment the country is divided into the eastern and western inspection divisions, the western division including Fort William and Port Arthur and all territory west thereof. Elevators were introduced shortly after the year 1880. They were designed to take advantage of the flowing property of grain in bulk, and their equipment enabled the grain to be handled much more easily than was possible with the primitive warehouse. They have grown rapidly in number, whilst the old flat warehouse has practically disappeared. Dissatisfaction with the elevators on the part of farmers resulted in the introduction of what are called "loading platforms." The loading platform is a wooden structure on a siding on to which a farmer can drive his team and from which he can shovel the grain into the car. There are now in existence some 1,934 loading platforms, distributed as follows: Manitoba, 580; Saskatchewan, 881; Alberta, 466; and British Columbia, 7. They have a loading capacity of 4,539 cars simultaneously, and during the crop year ended August 31, 1922, 20,554,247 bushels of grain were handled over these platforms.

Grain Elevators.—As a general rule the elevators are owned and operated by commercial companies or farmers' co-operative companies. When the farmer takes his grain to an elevator he can either sell the grain to the operator, in which case it is called "street grain," or he can hire a bin in the elevator to keep his grain distinct from all other grain, in which case it is called "special binned grain," or he can store it with other grain of the same grade. If he stores the grain either in a special or general bin, he arranges with the railway company for a car, and the elevator loads the grain into the car to his order. When the grain is loaded he can either sell it on the spot as track grain, or send it forward consigned on commission. The farmer hauls the grain unsacked, and bulk handling is universal. Under the Canada Grain Act, the Dominion Government has power itself to erect and operate terminal grain elevators. One such elevator is in operation at Port Arthur, and four other government elevators are in operation at Moose Jaw, Saskatoon, Calgary and Vancouver.

There are six different kinds of elevators defined in the Grain Act, viz., (1) "country elevators," situated at railway stations and receiving grain for storage before inspection; (2) "public elevators," which receive grain for storage from the western inspection division after inspection; (3) "eastern elevators," for the storage after inspection of eastern grown grain; (4) "terminal elevators," which receive

[1] See Canada Year Book, 1912 p. 450.

or ship grain at points declared to be terminal; (5) "private terminal or hospital elevators," used for cleaning or other special treatment of rejected or damaged grain; under regulations governing sample markets all grain received into such elevators must be their own property, though the owner or owners of grain may contract for the handling or mixing of grain in such elevators; and (6) "manufacturing elevators," used or operated as part of any plant engaged in the manufacture of grain products in the western inspection division. Of these different kinds of elevators the most important, so far as the western grain trade is concerned, are the terminal elevators, which are situated at Fort William and Port Arthur, the twin cities at the head of lake Superior. They are called "terminal elevators," as the inspection of western grain ends at them. The grade given as grain leaves the elevators at these points is the final grade, on which it is sold and delivered, both in Eastern Canada and in foreign markets. At the present time there are 12 of these terminal elevators (8 at Fort William and 4 at Port Arthur), with a total storage capacity of about 42,600,000 bushels, and 20 private terminal or hospital elevators with a capacity of 14,210,000 bushels (13 at Fort William and 7 at Port Arthur).

Grain Inspection and Grading.—All grain grown in Canada and shipped in car-load lots or cargoes from elevators is subject to government inspection and grading, and the grain is sold both at home and abroad on the inspection certificate entirely by grade and not by sample. As each car arrives at an inspection point it is sampled and graded by qualified samplers and inspectors appointed under the Act. When the grain arrives at the terminal elevators it is weighed, cleaned and binned according to grade under the direct supervision of the inspectors, and a warehouse receipt is issued by the elevator operator to the owner of the grain. When the grain is ordered out of the terminal elevator in car or cargo lots, it is again weighed and inspected, and it must be graded out as graded in; thus the identity of grade of exported grain is carefully preserved through every stage of movement. The principal inspection point for western grain is at Winnipeg. The work is done by inspectors who are qualified by an examination held by the Board of Grain Examiners appointed by the Board of Grain Commissioners. Rules and regulations governing the duties of the above Inspectors are approved by the Grain Commissioners and the inspection is performed in offices rented by the Government in the Grain Exchange Buildings at Winnipeg and Fort William.

Description of Grades.—Under the Act, Canadian grain is divided into five general classes, viz., "No grade," "Condemned," "Rejected," "Commercial grade" and "Statutory grade." "No grade" includes all good grain that has an excessive moisture, being tough, damp or wet, or otherwise unfit for warehousing. "Condemned grain" means all grain that is in a heating condition or is badly bin-burnt, whatever grade it might otherwise be. "Rejected grain" means all grain that is unsound, musty, dirty, smutty or sprouted, or that contains a large admixture of other kinds of grain, seeds or wild oats, or that from any other cause is unfit to be classed under any of the recognized grades. "Commercial grade" means grain which, because of climatic or other conditions, cannot be included in the grades provided for in the Act. More particularly it means that the grain of one year may vary from that of the preceding year, and that a proportion of it cannot be dealt with under the grades laid down in the Act, and must be provided for by grades defined by the Standards Board, appointed under sections 48 to 51 of the Act. "Statutory grades" means grain of the highest grades as defined by Parliament, in the Grain Act. There are four of these grades for Manitoba

spring wheat, three each for Alberta red and white winter wheat and two for Alberta mixed winter wheat. There are also statutory definitions of the highest grades of oats, barley, rye and flaxseed. Thus the statutory definitions can only be changed by Parliament; they do not vary with the crop, but are constant. The Commercial grades, on the other hand, are fixed by the Standards Board, and may vary from year to year. The Act defines four grades of western spring wheat, viz., No. 1 Hard, No. 1 Northern, No. 2 Northern and No. 3 Northern, whilst the Standards Board has defined three additional grades, viz., No. 4 Northern, No. 5 Northern and No. 6 Northern. But wheat of any of the six grades of Northern may fall under the general categories of "no grade," "condemned," or "rejected." Grain, as inspected and graded at Winnipeg, is received into the terminal elevators, but is again finally inspected and graded in bulk as it is loaded into the lake steamers. For this final grading the grain is sampled at three places, viz., in the tunnels as the grain flows from the storage bins to the working house, on the floor of the working house and on the steamer as it pours from the shipping bin to the hold.

Recent Developments.—The construction of the Panama Canal has necessitated the provision of elevator and inspection facilities for grain to be shipped by this route. To meet the new requirements it has been decided to erect at the Pacific coast transfer elevators similar to those at Montreal, Halifax and St. John, and at strategic points in the interior, terminal elevators similar to the elevators at Fort William and Port Arthur. Elevators have been erected at Moose Jaw, Saskatoon, Calgary and Vancouver. The first two have been in operation since October, 1914, while the Calgary elevator commenced operations in September, 1915, and the Vancouver elevator in November, 1916. These have a total storage capacity of 11,750,000 bushels. These elevators bring the work of inspection somewhat nearer to the grain-growing area. In addition, they provide, for the first time in Western Canada, hospital apparatus upon the grain field to treat damaged grain. Besides, they place in the hands of the producer a commercial document in the shape of a warehouse receipt to enable him to realize money on his product at the current rate of interest and dispose of it as he sees fit. It was not intended that these elevators should take the place of the lake terminal elevators for grain shipped east, or that they could be very much utilized for east-going grain during the period of navigation on the Great Lakes. They were built partly because of the necessity of providing for the Panama Canal route in a way that would give a fair trial to the route which during the past year has become a large factor in carrying grain to Europe. The enormous quantity of grain grown in Western Canada and the difficulty of shipping it all by the eastern route—a difficulty enhanced by the shortness of the period of navigation and the long rail haul from the grain fields to the Atlantic—constitute conditions which have led to the hope that the Panama Canal will be an immense gain to the grain growers of Alberta.

Movement of Canadian Wheat, Crop Year, 1921-1922.—A *résumé* of the Canadian wheat movement naturally begins with a description of the pool fed chiefly by the crop of the western inspection division. The wheat crop of 1921, marketed in the western division during the crop year from September 1, 1921, to Aug. 31, 1922, amounted to 281·3 million bushels. Other acquisitions, including a carry-over from the previous crop year of 5·3 million bushels, brought the stock of the western pool to a total for the year of 286·8 million bushels. As for distribution, out of the 217·4 million bushels which were commercially disposed of, the shipments to the eastern division of 86·7 million bushels and the direct export to Great Britain of 75 million bushels were the chief items. The direct exports to the

United States were 15·8 million bushels and to other countries 18·7 million bushels. The total shipments from the Western pool were thus 196·2 million bushels. The all rail movement eastward from the Western division, including shipments to the Ogilvie Flour Mills Co. at Fort William for grindings, were 12·9 million bushels. Lake shipments from Fort William and Port Arthur were 175·6 million bushels, 73·6 million bushels going to Canadian ports and 102·0 million to United States ports. The shipments to Canadian ports represent an increase of 33 p.c. and to American ports an increase of 50 p.c. over 1920-21. The principal Canadian Lake ports were Port McNicol, with receipts of 17 million bushels by water, Goderich, with receipts of 10 million bushels by water, and Port Colborne, with total receipts of 29·5 million bushels, an increase of 11·5 million bushels over the receipts during the previous crop year. Buffalo was of chief importance among the United States Lake ports in the handling of Canadian wheat with receipts by water from Port Arthur and Fort William of 97 million bushels. The export of wheat through Vancouver, including a small shipment to the United States, was 7·8 million bushels as compared with 0·57 million in the previous crop year.

The wheat used by the milling companies of the Western division for the manufacture of flour amounted to about 21·2 million bushels, of which 18·3 million bushels were ground into flour for domestic consumption. The seed requirements were estimated at 37·2 million bushels and the stocks at the end of the crop year were more than double the carry-over at its commencement.

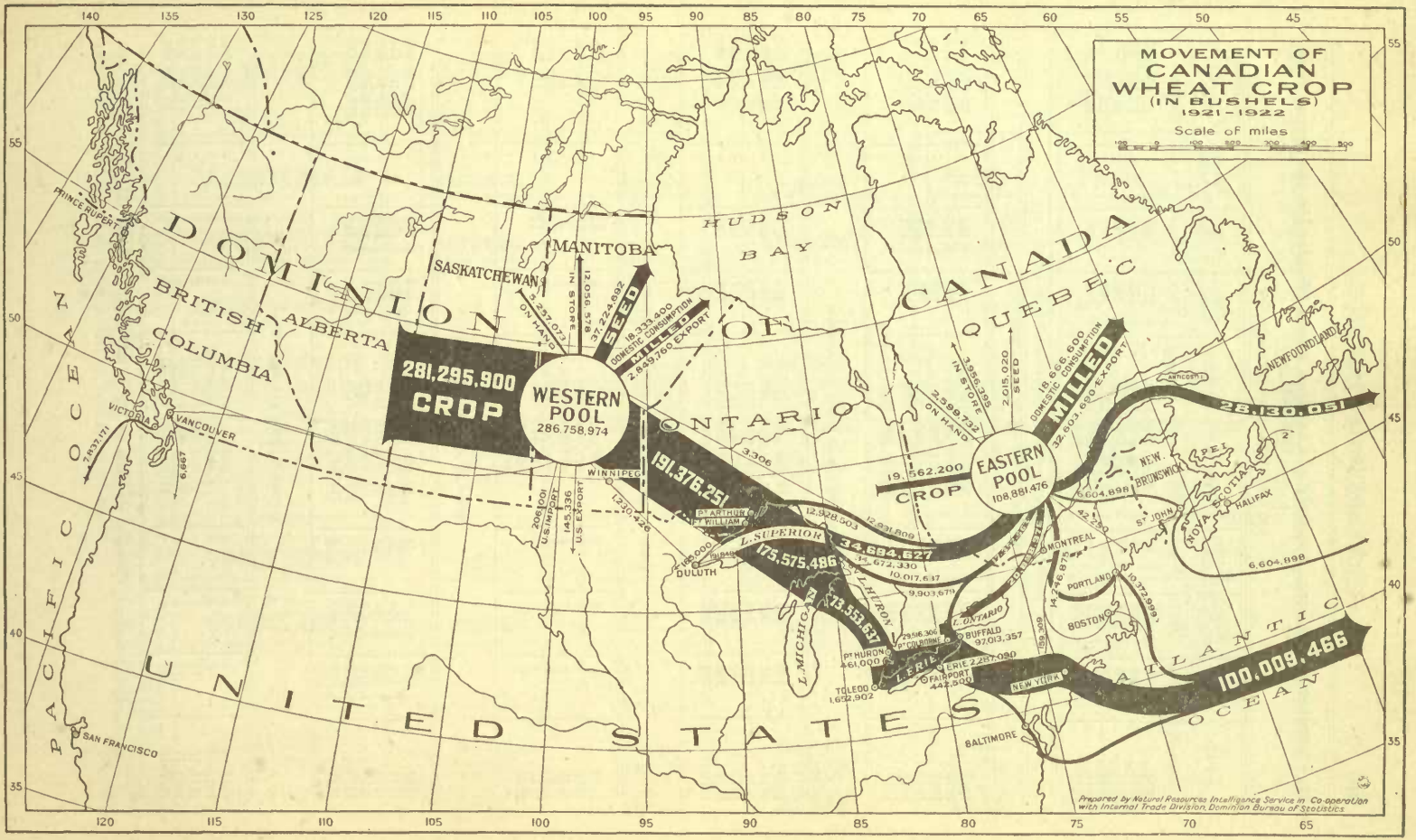
The eastern pool received during the crop year not only the Eastern crop estimated at 19·6 million bushels, but also shipments from the West aggregating 86·7 million bushels. The quantity on hand at the beginning of the crop year was 2·6 million bushels, making with a comparatively small importation from the United States, a total stock entering the eastern pool of 108·9 million bushels. The distribution included nearly 4 million bushels carried over in store into the following year, 28·1 million bushels exported from the St. Lawrence ports and 6·6 million bushels shipped through the winter port of St. John. In addition 14·1 million bushels were cleared for export to other countries *via* the United States Atlantic ports. The chief of these ports concerned with the movement of Canadian grain from both divisions were New York, with shipments of 39·7 million bushels, Philadelphia, with 28·1 million, and Portland, with 10·4 million.[1]

Total exports from Canada to the United States for consumption amounted to 15·9 million bushels, to the United Kingdom 112·3 million bushels, to other countries 30·3 million bushels: 42·6 million bushels were shipped *via* Canadian ports and 100 million bushels were shipped by United States ports. Total exports of wheat from Canada during the crop year amounted to 158·5 million bushels.

Table **29** shows for the license years 1913 to 1923 the number of railway stations at which elevators are placed, the number of elevators and warehouses and their total storage capacity, the figures being given by provinces for the country elevators of the west, and by description of elevators for the rest of the country. Tables **30** and **31** give statistics of the inspection of grain for the fiscal years 1921, 1922 and 1923 and for 1914-23, and Tables **32** and **33** of the shipment of grain by vessel and rail for 1921 and 1922.

Tables **34** and **35** deal with the Canadian grain handled in recent years at public elevators in the East.

[1]For further information see the Report on the Grain Trade of Canada issued by the Internal Trade Branch of the Dominion Bureau of Statistics.


MOVEMENT OF
CANADIAN
WHEAT CROP
(IN BUSHELS)
1921-1922
Scale of miles
DOMINION OF CANADA
UNITED STATES
PACIFIC OCEAN
ATLANTIC OCEAN
HUDSON BAY
BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
ONTARIO
QUEBEC
NEWFOUNDLAND
NEW BRUNSWICK
N. SCOTIA
P.E.I.
281,295,900
CROP
WESTERN
POOL
286,758,974
SEED
MILLED
EXPORT
ON HAND
IN STORE
191,376,251
19,562,200
CROP
EASTERN
POOL
108,881,476
28,130,051
100,009,466
175,575,486
34,684,627
173,551,627
PRINCE RUPERT
VICTORIA
VANCOUVER
WINNIPEG
DULUTH
FT. WILLIAM
PT. ARTHUR
L. SUPERIOR
L. MICHIGAN
L. HURON
L. ERIE
L. ONTARIO
MONTREAL
QUEBEC
ST. JOHN
HALIFAX
PORTLAND
BOSTON
NEW YORK
BUFFALO
TOLEDO
BALTIMORE
SAN FRANCISCO
Prepared by Natural Resources Intelligence Service in Co-operation with Internal Trade Division, Dominion Bureau of Statistics

29.—Number and Storage Capacity of Canadian Grain Elevators in the license years 1913-1923.

COUNTRY ELEVATORS IN MANITOBA.

Years.	Stations.	Elevators.	Warehouses.	Capacity.	Year.	Stations.	Elevators.	Warehouses.	Capacity.
	No.	No.	No.	Bushels.		No.	No.	No.	Bushels.
1913	338	698	10	22,253,150	1919	371	702	–	22,926,300
1914	346	689	6	21,690,000	1920	379	695	–	23,024,500
1915	348	678	8	22,045,500	1921	380	692	–	22,073,600
1916	348	682	6	22,113,000	1922	386	701	–	22,159,100
1917	352	672	–	21,250,000	1923	385	696	–	21,970,100
1918	366	690	–	21,825,000					

COUNTRY ELEVATORS IN SASKATCHEWAN.

1913	513	1,246	6	36,503,000	1919	753	2,160	–	67,331,664
1914	647	1,465	5	42,995,000	1920	753	2,165	–	68,058,470
1915	653	1,619	5	48,074,500	1921	767	2,184	–	68,867,020
1916	710	1,782	1	52,943,000	1922	782	2,224	–	70,181,320
1917	732	1,945	–	58,625,000	1923	797	2,304	–	72,542,320
1918	752	2,117	–	64,384,200					

COUNTRY ELEVATORS IN ALBERTA.

1913	168	321	19	11,565,500	1919	314	830	–	32,148,000
1914	195	397	11	14,793,000	1920	334	853	–	33,462,000
1915	219	449	14	16,089,000	1921	350	897	–	35,716,000
1916	249	525	11	18,807,000	1922	357	915	–	36,092,000
1917	285	670	–	23,106,000	1923	370	936	–	36,854,000
1918	304	808	–	28,833,000					

COUNTRY ELEVATORS IN BRITISH COLUMBIA.

1913	6	7	2	562,000	1919	8	13	–	613,000
1914	6	7	2	562,000	1920	7	13	–	561,000
1915	5	7	1	440,000	1921	7	12	–	517,000
1916	5	6	1	459,000	1922	7	12	–	541,000
1917	6	9	–	527,000	1923	5	12	–	541,000
1918	6	10	–	548,000					

TOTALS OF COUNTRY ELEVATORS.

1913	1,025	2,272	37	70,883,650	1919	1,446	3,705	–	123,018,964
1914	1,194	2,558	24	80,040,000	1920	1,473	3,726	–	125,105,970
1915	1,225	2,753	28	86,649,000	1921	1,504	3,785	–	127,173,620
1916	1,312	2,995	19	94,322,000	1922	1,532	3,852	–	128,973,420
1917	1,375	3,296	–	103,508,000	1923	1,559	3,948	–	131,907,420
1918	1,428	3,625	–	115,600,200					

INTERIOR TERMINAL ELEVATORS.

1913–14	1	1	–	1,000,000	1918–19	5	5	–	11,500,000
1914–15	3	3	–	8,000,000	1919–20	5	5	–	11,500,000
1915–16	(1)	4	–	10,500,000	1920–21	5	5	–	11,500,000
1916–17	(1)	4	–	10,500,000	1921–22	5	5	–	11,500,000
1917–18	(5)	5	–	11,500,000	1922–23	3	4	–	10,500,000

NOTE.—The statistics of Canadian elevators for 1901 to 1912 are given in the 1921 Year Book, pp. 507–509.

29.—Number and Storage Capacity of Canadian Grain Elevators in the license years 1913-1923—concluded.

INTERIOR HOSPITAL ELEVATORS.

Years.	Stations..	Elevators.	Warehouses.	Capacity.	Year.	Stations.	Elevators.	Warehouses.	Capacity.
	No.	No.	No.	Bushels.		No.	No.	No.	Bushels.
1913-14....	(3)	5	–	680,000	1918-19...	5	5	–	460,000
1914-15....	(3)	6	–	805,000	1919-20...	5	5	–	485,000
1915-16....	(3)	7	–	825,000	1920-21...	5	6	–	585,000
1916-17....	(3)	6	–	805,000	1921-22...	4	6	–	605,000
1917-18....	(4)	5	–	505,000	1922-23...	5	7	–	1,620,000

BRITISH COLUMBIA TERMINAL AND PUBLIC ELEVATORS.

1915-16....	(1)	2	–	1,266,000	1919-20...	1	2	–	1,266,000
1916-17....	(1)	2	–	1,266,000	1920-21...	1	1	–	1,250,000
1917-18....	(1)	2	–	1,266,000	1921-22...	(1)	1	–	1,250,000
1918-19....	(1)	2	–	1,266,000	1922-23...	(1)	1	–	1,250,000

NOTE.—Figures in parentheses are excluded from the grand total.

ONTARIO TERMINAL ELEVATORS.

1913[1].....	4	20	–	28,380,000	1919[1].....	4	31	–	51,405,000
1914[1].....	4	23	–	41,455,000	1920[1].....	4	30	–	52,255,000
1915[1].....	4	25	–	42,180,000	1921[1].....	4	30	–	54,685,000
1916[1].....	4	25	–	43,085,000	1922[1].....	2	32	–	53,285,000
1917[1].....	4	26	–	45,325,000	1923[1].....	2	32	–	56,810,000
1918[1].....	4	29	–	49,370,000					

ONTARIO MILLING ELEVATORS.

1913.....	3	3	–	1,700,000	1919.....	2	3	–	1,800,000
1914.....	2	3	–	1,700,000	1920.....	2	4	–	1,840,000
1915.....	2	3	–	1,700,000	1921.....	2	4	–	1,840,000
1916.....	2	3	–	1,700,000	1922.....	2	4	–	1,840,000
1917.....	2	3	–	1,700,000	1923.....	2	4	–	1,840,000
1918.....	2	3	–	1,700,000					

PUBLIC ELEVATORS.

1913.....	17	23	–	25,220,000	1919.....	17	25	–	31,790,000
1914.....	16	22	–	29,850,000	1920.....	17	25	–	33,805,000
1915.....	15	22	–	29,250,000	1921.....	17	24	–	34,180,000
1916.....	15	22	–	29,250,000	1922.....	14	24	–	34,180,000
1917.....	16	22	–	30,700,000	1923.....	14	24	–	34,180,000
1918.....	17	24	–	31,610,000					

GRAND TOTAL OF CANADIAN ELEVATORS.

1901.....	219	426	97	18,329,352	1913[2].....	1,049	2,319	37	127,224,550[3]
1902.....	243	544	87	22,549,000	1914[2].....	1,220	2,613	24	154,765,000[3]
1903.....	285	740	82	29,806,400	1915[2].....	1,252	2,813	28	168,624,000[3]
1904.....	323	919	64	40,636,000	1916.....	1,338	3,059	19	180,988,000[3]
1905.....	359	977	46	46,403,630	1917.....	1,402	3,360	–	193,844,000[3]
1906.....	415	1,059	50	50,453,200	1918.....	1,461	3,694	–	211,591,200[3]
1907.....	491	1,221	52	55,222,200	1919.....	1,480	3,777	–	221,279,964[3]
1908.....	526	1,318	36	58,535,700	1920.....	1,507	3,797	–	226,256,970
1909[2].....	647	1,446	41	78,016,100	1921.....	1,538	3,855	–	231,213,620
1910[2].....	788	1,802	38	94,266,100	1922.....	1,559	3,924	–	231,633,420
1911[2].....	863	1,909	32	105,462,700[3]	1923.....	1,578	4,020	–	238,107,420
1912[2].....	937	2,037	31	108,649,900[3]					

[1]Including Hospital Elevators. [2]Including Public Elevators in the Eastern Inspection Division. [3]The totals for the years 1911 to 1919 include 1 Ontario country elevator, with a capacity of 40,000 bushels.

NOTE.—The average capacity of railway cars for the carriage of grain is for Wheat 1,300, Oats 2,000, Barley 1,475, Flaxseed 1,125, and Rye 1,350 bushels for the crop of 1922. Detailed statistics of elevators for the years 1901 to 1912 are given in the 1921 Year Book, pp. 507-509.

30.—Quantities of Grain Inspected during the fiscal years 1921-1923.

Grades of Grain.	1921.		1922.		1923.	
	Eastern Division.	Western Division.	Eastern Division.	Western Division.	Eastern Division.	Western Division.
	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.
Wheat, Spring—						
Man. No. 1 Hard	-	160,000	-	2,757,825	-	1,031,125
Northern No. 1	-	71,487,500	-	66,725,850	-	180,960,225
" No. 2	-	42,891,250	-	46,909,800	-	48,569,175
" No. 3	-	42,192,500	-	53,806,275	-	30,674,425
" No. 4	-	8,907,500	-	18,465,825	-	4,512,525
" No. 5	-	1,927,500	-	4,944,450	-	1,302,725
" No. 6	-	535,000	-	1,204,875	-	655,350
Feed	-	147,500	-	295,800	-	188,425
Rejected Smutty—						
No. 1	-	538,750	-	716,550	-	915,500
No grade	-	11,401,250	-	11,965,875	-	10,269,150
Condemned	-	53,750	-	24,225	-	54,550
No established grade	-	10,000	-	16,575	-	16,825
Commercial grades—						
No. 1	446,306	33,750	209,588	-	215,968	5,200
No. 2	75,786	-	45,816	-	11,680	1,300
No. 1 Spring	14,121	-	1,100	-	-	-
No. 2 "	136,221	-	31,480	-	5,063	-
No. 3 "	37,214	-	6,950	-	3,574	-
Rejected	6,302	-	3,000	-	-	-
No grade	3,000	-	1,000	-	1,000	-
Goose No. 1	-	-	-	-	-	-
" No. 2	3,900	-	1,000	-	1,133	-
" No. 3	4,200	-	2,000	-	-	-
Rejected	1,000	-	3,000	-	-	-
Rejected	-	3,830,000	-	2,768,025	-	6,363,700
No. 1 Durum	-	52,500	-	67,575	-	166,225
No. 2 "	-	90,000	-	276,675	-	977,850
No. 3 "	-	118,750	-	322,575	-	1,113,625
No. 4 "	-	3,750	-	24,225	-	28,500
No. 5 "	-	-	-	-	-	5,200
Rejected	-	-	-	6,375	-	383,475
Durum and Spring	-	-	-	53,550	-	168,600
Red Durum	-	-	-	28,050	-	163,675
U.S. Durum—						
Amber No. 2	2,798,583	-	1,891,248	-	5,898,710	-
Amber No. 3	3,963,062	-	581,484	-	-	-
Mixed No. 2	160,647	-	2,715,349	-	6,798,461	-
Durum No. 2	-	-	-	-	2,264,899	-
No. 2 Mixed D Wheat	-	-	1,024,191	-	-	-
Dark No. 2 Nor	-	-	70,718	-	-	-
No. 4 Special	-	686,250	-	-	-	-
No. 5 "	-	127,500	-	-	-	-
No. 6 "	-	30,000	-	-	-	-
No grade Durum	-	-	-	-	-	296,400
Smutty—Wheat and Rag weed	-	-	-	12,750	-	-
Spring and Durum	-	-	-	105,825	-	180,050
Wheat and Rye	-	-	-	30,600	-	110,450
Rejected and Sprouted	-	-	-	9,544,650	-	1,086,700
Durum and Barley	-	-	-	1,275	-	13,000
Smutty-Durum	-	-	-	-	-	2,600
Wheat and Oats	-	-	-	-	-	8,975
Wheat and Barley	-	-	-	-	-	3,900
Durum and Oats	-	-	-	-	-	5,200
Wheat and wild oats	-	-	-	-	-	9,100
Wheat, barley and oats	-	-	-	-	-	1,300
Wheat and Gravel	-	-	-	-	-	1,300
Durum Spring and Rye	-	-	-	-	-	7,800
Durum, Spring and Oats	-	-	-	-	-	1,300
Total Spring Wheat.	**7,650,342**	**185,225,000**	**6,587,924**	**221,076,075**	**15,200,488**	**290,255,425**

30.—Quantities of Grain Inspected during the fiscal years 1921-1923—con.

Grades of Grain.	1921.		1922.		1923.	
	Eastern Division.	Western Division.	Eastern Division.	Western Division.	Eastern Division.	Western Division.
	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.
Wheat, Winter—						
U.S. Hard Winter—						
No. 1	794,614	–	4,061,611	–	1,954,773	–
No. 2	749,760	–	8,828,266	–	13,243,535	–
No. 3	79,306	–	159,424	–	–	–
No. 2 Red Hard Winter	–	–	530,067	–	–	–
White Winter—						
No. 1	34,501	–	3,455	–	–	3,900
No. 2	452,636	–	18,236	–	67,626	5,200
No. 3	38,975	–	4,000	–	8,510	–
No. 1 Winter	–	–	–	15,300	–	–
No. 2 "	–	–	–	3,825	–	–
Rejected	14,258	–	12,500	–	4,550	–
No grade	9,461	–	–	–	1,300	–
Mixed Winter—						
No. 1	7,497	–	–	–	–	–
No. 2	439,624	–	103,330	–	348,621	–
No. 3	135,006	–	56,303	–	181,784	–
No. 4	4,635	–	–	–	–	–
No grade	48,641	–	6,245	–	31,949	–
Rejected	45,142	–	120,883	–	71,977	–
U.S. No. 1	8,115	–	–	–	–	–
Alberta Red Winter—						
No. 1	4,560	83,750	–	22,950	–	38,900
No. 2	184,098	23,750	16,918	10,200	272,443	18,100
No. 3	77,186	2,500	27,600	2,550	177,964	1,300
No. 4	2,200	–	–	1,275	–	–
Rejected	–	–	–	–	47,173	–
No grade	–	–	–	–	4,788	–
U.S. No. 1 Red Winter	249,804	–	–	–	–	–
U.S. No. 2 Red Winter	1,104,864	–	5,012,449	–	2,503,759	–
Rejected	38,794	–	36,040	–	–	–
Smutty	–	1,250	–	–	–	–
No grade	4,138	2,500	–	–	–	–
Alberta White Winter—						
No. 2	–	–	–	–	–	–
No. 3	–	–	–	–	–	–
No. 4	–	–	–	–	–	–
Rejected	–	–	–	–	–	–
No grade	–	–	–	–	–	–
Commercial grades—						
No. 1 W.W	14,061	–	56,862	–	–	–
No. 2 W.W	–	–	1,780	–	–	–
No. 1 M.W	2,200	–	47,340	–	–	–
No. 2 M.W	–	–	–	–	–	–
No. 1 R.W	–	–	–	–	–	–
No. 2 R.W	14,554	–	1,200	–	–	–
No grade, tough	–	–	90	–	–	–
Total Winter Wheat	**4,558,630**	**113,750**	**19,104,599**	**56,100**	**18,920,752**	**67,400**
Total Spring and Winter Wheat	**12,208,972**	**185,338,750**	**25,692,523**	**221,132,175**	**34,121,249**	**290,322,825**
Indian Corn—						
No. 1 American	1,500	–	1,246,709	–	1,071	–
No. 2 American	16,222	–	50,437,158	–	33,405,523	–
No. 3 American	184,445	–	137,778	–	118,403	–
No. 4 American	–	–	49,190	–	29,531	–
No. 6	–	–	–	–	1,400	–
Rejected	14,410	–	5,200	–	15,597	–
No grade	–	–	–	–	4,600	–
American, other	56,188	–	11,152	–	–	–
Argentine corn	42,055	–	4,284	–	–	–
No. 2 Can. Yellow	–	–	–	–	3,400	–
No. 3 Can. Yellow	–	–	–	–	6,482	–
No. 3 Mixed	–	–	–	–	4,308	–
Rejected	–	–	–	–	2,140	–
Total Corn	**314,820**	**2,000**	**51,891,471**	**5,000**	**33,592,455**	**15,000**

30.—Quantities of Grain Inspected during the fiscal years, 1921-1923—con.

Grades of Grain.	1921.		1922.		1923.	
	Eastern Division.	Western Division.	Eastern Division.	Western Division.	Eastern Division.	Western Division.
	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.
Oats—						
No. 1	–	2,000	–	90,000	–	86,000
No. 2	375,315	92,000	6,980	15,334,000	298,982	9,930,000
No. 3	1,411,206	13,170,000	52,193	14,934,000	728,255	15,464,000
No. 4	294,069	13,818,000	30,350	–	424,642	–
Feed extra No. 1	–	4,558,000	–	5,508,000	–	1,520,000
Feed No. 1	–	6,340,000	–	6,290,000	–	7,256,000
Feed No. 2	–	6,266,000	–	4,268,000	–	5,732,000
Rejected	215,071	1,304,000	182,850	592,000	216,088	618,000
No grade	130,792	18,912,000	–	22,582,000	168,539	10,332,000
Condemned	–	22,000	–	44,000	–	8,000
Oats and W. Oats	–	–	–	–	–	22,000
Oats and rye	–	–	–	–	–	10,000
W. Oats	–	–	–	–	–	16,000
B. Oats	–	–	–	–	–	12,000
Oats and wheat	–	–	–	–	–	8,000
Mixed	–	1,176,000	–	886,000	–	1,146,000
Speltz	–	2,000	–	–	–	3,000
U.S. No. 2	–	–	–	–	951,266	–
U.S. No. 3	–	–	–	–	1,500	–
U.S. No. 3 clipped	–	–	–	–	–	–
Total Oats	**2,426,453**	**65,662,000**	**272,373**	**70,528,000**	**2,789,272**	**52,163,000**
Buckwheat—						
No. 2	141,014	–	289,878	–	454,785	–
No. 3	7,450	–	17,727	–	5,989	–
No grade	19,173	–	9,170	–	13,632	–
Rejected	5,631	–	15,750	–	5,329	–
Total Buckwheat	**173,268**	**–**	**332,525**	**–**	**479,735**	**11,000**[1]
Barley—						
No. 1	–	–	–	–	1,546	–
No. 2	1,250	–	–	–	11,690	–
No. 3, extra	145,531	99,400	4,370	58,800	116,092	20,275
No. 3	358,309	5,026,000	151,509	7,051,800	143,482	8,838,150
No. 4	110,380	3,094,000	96,365	3,101,000	71,348	3,159,400
Feed	–	1,313,200	–	624,400	–	915,250
Rejected	86,557	1,029,000	255,527	786,800	40,976	1,099,550
No grade	–	3,085,600	–	3,252,200	1,250	4,055,450
Condemned	–	9,800	–	2,800	–	–
Smutty	–	8,400	–	1,400	–	–
Barley and rye	–	–	–	1,400	–	2,875
Barley and W. oats	–	–	–	–	–	72,275
Barley and Durum	–	–	–	–	–	1,475
Barley and wheat	–	–	–	–	–	2,950
Millet	–	–	–	–	–	1,475
U.S. No. 1	91,430	–	–	–	–	–
U.S. No. 3	49,999	–	51,701	–	–	–
Total Barley	**843,456**	**13,665,400**	**559,472**	**14,880,600**	**386,384**	**18,170,125**
Rye—						
No. 1 C.W.	–	–	–	–	–	2,608,050
No. 2 C.W.	–	–	–	–	–	6,711,075
No. 3	–	–	–	–	–	543,375
Rejected	–	–	–	–	–	762,900
No grade	–	–	–	–	–	1,007,325
Feed	–	–	–	–	–	4,050
Rejected wheat and barley	–	–	–	–	–	2,700
Rye and wheat	–	–	–	–	–	165,750
Rejected oats and wheat	–	–	–	–	–	1,350
Rye and oats	–	–	–	–	–	20,175
Rye and barley	–	–	–	–	–	4,050
Rye and W. oats	–	–	–	–	–	1,350
Rye, all grades	1,387,493	2,967,500	221,401	3,966,525	97,740	11,832,150
U.S. Rye	4,572,841	–	6,845,117	–	14,828,486	–

[1]No grade given.

30.—Quantities of Grain Inspected during the fiscal years, 1921-1923—concluded.

Grades of Grain.	1921.		1922.		1923.	
	Eastern Division.	Western Division.	Eastern Division.	Western Division.	Eastern Division.	Western Division.
	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.
Flaxseed—						
No. 1 N.W.C.	–	3,146,525	–	2,993,100	–	3,056,850
No. 2 C.W.	–	712,725	–	566,500	–	518,550
No. 3 C.W.	–	522,450	–	78,100	–	59,100
No grade	–	232,200	–	162,600	–	115,325
Rejected	–	422,475	–	28,600	–	29,850
Condemned	–	–	–	1,100	–	2,225
Fake Flaxseed	–	–	–	2,200	–	–
Flaxseed and buckwheat	–	–	–	–	–	1,100
Total Flaxseed	–	**5,036,375**	–	**3,832,200**	–	**3,783,000**
Peas, all grades	3,000	–	10,781	–	13,164	–
Screenings	–	455,000	–	484,000	–	215,000

31.—Quantities of Grain Inspected during the fiscal years ended March 31, 1914-1923.

Grain.		Eastern Division.					Western Division.	Grand Total.
		Kingston.	Peterboro.	Toronto.	Montreal.	Total.		
		Bush.	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.
Wheat	1914	1,000	40,968	104,590	128 000	274,558	154,995,750	155,270,308
	1915	–	38,402	139,702	2,628,670	2,806,774	107,916,750	110,723,524
	1916	–	–	376,777	1,412,246	1,789,023	251,277,000	253,066,023
	1917	–	–	423,871	209,168	632,039	192,070,700	192,702,739
	1918	–	–	281,704	448,144	730,118	193,538,100	194,268,218
	1919	–	–	386,814	371,389	758,203	124,849,525	125,607,728
	1920	–	–	403,135	233,778	636,913	120,791,125	121,428,038
	1921	–	–	2,087,539	10,121,433	12,208,972	185,338,750	197,547,722
	1922	–	–	602,774	25,089,749	25,692,523	221,132,175	246,824,698
	1923	–	–	1,438,116	32,683,124	34,121,240	290,322,825	324,444,065
Corn	1914	–	–	21,130	72,990	94,120	–	94,120
	1915	–	–	16,405	111,501	127,906	–	127,906
	1916	–	–	18,252	112,321	130,573	–	130,573
	1917	–	–	–	1,286,779	1,286,779	–	1,286,779
	1918	–	–	1,676	743,349	745,025	–	745,025
	1919	–	–	–	592,340	592,340	–	592,340
	1920	–	–	–	472,408	472,408	7,000	479,408
	1921	–	–	–	314,820	314,820	2,000	316,820
	1922	–	–	5,355	51,886,116	51,891,471	5,000	51,896,471
	1923	–	–	16,330	33,576,125	33,592,455	15,000	33,607,455
Oats	1914	–	62,200	543,657	73,582	679,439	73,035,300	73,714,739
	1915	–	109,388	933,680	1,706,349	2,749,417	35,837,800	38,587,217
	1916	–	–	1,376,546	1,723,966	3,100,512	68,649,000	71,749,512
	1917	–	–	445,031	449,268	894,299	95,159,750	96,054,049
	1918	–	–	459,802	427,900	887,702	79,409,850	80,297,552
	1919	–	–	1,537,863	1,900,309	3,438,172	36,154,000	39,592,172
	1920	–	–	344,289	332,987	677,276	59,379,450	60,056,726
	1921	–	–	643,412	1,783,041	2,426,453	65,662,000	68,088,453
	1922	–	–	241,140	31,233	272,373	70,528,000	70,800,373
	1923	–	–	453,398	2,335,874	2,789,272	52,163,000	54,952,272
Buckwheat	1914	–	62,771	72,730	4,108	139,609	–	139,609
	1915	–	23,760	284,324	28,008	336,092	–	336,092
	1916	–	–	339,747	127,508	467,255	–	467,255
	1917	–	–	77,802	37,737	115,539	–	115,539
	1918	–	–	71,652	54,386	126,038	–	126,038
	1919	–	–	293,914	62,050	355,964	–	355,964
	1920	–	–	82,863	38,532	121,395	2,000	123,395
	1921	–	–	145,506	27,762	173,268	–	173,268
	1922	–	–	262,262	70,263	332,525	–	332,525
	1923	–	–	333,575	146,160	479,735	11,000	490,735

31.—Quantities of Grain Inspected during the fiscal years ended March 31, 1914-1923—concluded.

Grain.	Eastern Division.					Western Division.	Grand Total.
	Kingston.	Peterboro.	Toronto.	Montreal.	Total.		
	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.
Barley.....1914	–	–	125,812	9,297	135,109	15,944,500	16,079,609
1915	–	1,100	230,122	24,146	255,368	4,953,000	5,208,368
1916	–	–	322,367	30,220	352,587	9,574,100	9,926,687
1917	–	–	134,691	10,927	145,618	10,627,500	10,773,118
1918	–	–	319,592	165,927	485,519	10,743,200	11,228,719
1919	–	–	727,047	773,420	1,500,467	9,596,600	11,097,067
1920	–	–	557,842	851,943	1,409,785	15,643,800	17,053,585
1921	–	–	237,868	605,588	843,456	13,655,400	14,508,856
1922	–	–	189,040	370,432	559,472	14,880,600	15,440,072
1923	–	–	127,337	259,047	386,384	18,170,125	18,556,509
Rye.....1914	–	11,857	4,980	162,900	179,737	72,000	251,737
1915	–	4,854	144,765	97,178	246,797	123,000	369,797
1916	–	–	374,782	179,157	553,939	116,000	669,939
1917	–	–	251,592	691,448	943,040	190,000	1,133,040
1918	–	–	218,994	389,133	608,127	478,000	1,086,127
1919	–	–	162,461	33,289	195,750	1,020,000	1,215,750
1920	–	–	163,395	929,007	1,092,402	2,172,350	3,264,752
1921	–	–	333,318	5,627,016	5,960,334	2,967,500	8,927,834
1922	–	–	97,431	6,969,087	7,066,518	3,966,525	11,033,043
1923	–	–	87,090	14,839,136	14,926,226	11,832,150	26,758,376
Flaxseed...1914	–	–	–	–	–	18,432,750	18,432,750
1915	–	–	–	–	–	4,001,600	4,001,600
1916	–	–	–	–	–	3,303,600	3,303,600
1917	–	–	–	–	–	7,086,200	7,086,200
1918	–	–	–	–	–	6,862,900	6,862,900
1919	–	–	–	14,351	14,351	3,075,900	3,090,251
1920	–	–	–	–	–	2,335,000	2,335,000
1921	–	–	–	–	–	5,036,375	5,036,375
1922	–	–	–	–	–	3,832,400	3,832,400
1923	–	–	–	–	–	3,783,000	3,783,000
Peas.....1914	–	–	1,667	2,900	4,567	–	4,567
1915	–	–	12,300	–	12,300	–	12,300
1916	–	–	14,944	400	15,344	–	15,344
1917	–	–	10,619	3,025	13,644	–	13,644
1918	–	–	1,000	3,100	4,100	–	4,100
1919	–	–	8,871	2,858	11,729	–	11,729
1920	–	–	19,072	10,816	29,888	–	29,888
1921	–	–	2,000	1,000	3,000	–	3,000
1922	–	–	10,781	–	10,781	–	10,781
1923	–	–	13,164	–	13,164	–	13,164
Screenings.....1916	–	–	–	–	–	281,000	281,000
1917	–	–	–	–	–	452,000	452,000
1918	–	–	–	–	–	–	–
1919	–	–	–	–	–	–	–
1920	–	–	–	–	–	669,000	669,000
1921	–	–	–	–	–	455,000	455,000
1922	–	–	–	–	–	484,000	484,000
1923	–	–	–	–	–	215,000	215,000
Total.....1914	**1,000**	**177,796**	**874,566**	**453,777**	**1,507,139**	**262,667,300**[1]	**264,174,439**[1]
" 1915	**–**	**177,504**	**1,761,298**	**4,674,160**[2]	**6,612,962**[2]	**153,038,150**[3]	**159,651,112**
" 1916	**–**	**–**	**2,823,415**	**3,585,818**	**6,409,233**	**333,200,700**	**339,609,933**
" 1917	**–**	**–**	**1,343,606**	**2,688,352**	**4,030,958**	**305,586,150**	**309,617,108**
" 1918	**–**	**–**	**1,354,420**	**2,232,209**	**3,586,629**	**291,032,050**	**294,618,679**
" 1919	**–**	**–**	**3,116,970**	**3,750,006**	**6,866,976**	**174,696,025**	**181,563,001**
" 1920	**–**	**–**	**1,570,596**	**2,869,741**	**4,440,067**	**200,999,725**	**205,439,792**
" 1921	**–**	**–**	**3,449,643**	**18,480,660**	**21,930,303**	**273,127,025**	**295,057,328**
" 1922	**–**	**–**	**1,408,783**	**84,416,880**	**85,825,663**	**314,828,700**	**400,654,363**
" 1923	**–**	**–**	**2,469,010**	**83,839,466**	**86,308,476**	**376,512,100**	**462,820,576**

[1]Includes 186,000 bushels of screenings and 1,000 bushels of speltz.
[2]Includes 78,308 bushels of Argentine corn.
[3]Includes 206,000 bushels of screenings.

32.—Shipments of Grain by Vessels from Fort William and Port Arthur for the navigation seasons 1921 and 1922.

Kind of Grain.	1921.			1922.		
	To Canadian ports.	To American ports.	Total shipments.	To Canadian ports.	To American ports.	Total shipments.
	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.
Wheat	69,454,217	84,474,599	153,928,816	96,729,810	128,651,648	225,381,458
Oats	39,335,427	5,835,494	45,170,921	18,039,045	7,709,373	25,748,418
Barley	9,398,118	2,503,745	11,901,863	7,256,764	5,611,304	12,868,068
Flaxseed	952,110	3,476,189	4,428,299	920,855	1,915,951	2,836,806
Rye	839,197	1,611,089	2,450,286	924,080	6,337,769	7,261,849
Total	**119,979,069**	**97,901,116**	**217,880,185**	**123,870,554**	**150,226,045**	**274,096,599**
Mixed grains.....lb.	59,192,484	21,884,466	81,076,950	28,896,900	241,727,419	270,624,319
Screenings.....ton.	9,379	20,501	29,880	16,673	74,840	91,513

33.—Shipments of Grain by vessels and all rail route from Fort William and Port Arthur for the crop years ended August 31, 1921 and 1922.

Kind of Grain.	1920-21.			1921-22.		
	Vessels.	Rail.	Total.	Vessels.	Rail.	Total.
	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.
Wheat—						
No. 1 Hard	57,402	-	57,402	920,551	82,103	1,002,654
No. 1 Northern	50,631,759	4,968,566	55,600,325	63,581,548	835,806	64,417,354
No. 2 Northern	33,920,643	3,856,896	37,777,539	38,228,756	2,810,086	41,038,842
No. 3 Northern	31,542,214	6,517,685	37,969,899	51,390,491	5,015,088	56,405,579
Sundry grades	7,059,236	2,554,850	9,614,086	22,000,650	3,687,700	25,688,350
Total Wheat	**123,121,254**	**17,897,997**	**141,019,251**	**176,121,996**	**12,430,783**	**188,552,779**
Oats	39,300,488	5,999,121	45,299,609	32,852,849	8,204,508	41,057,357
Barley	10,116,010	1,569,889	11,685,900	10,930,468	1,139,635	12,070,103
Flaxseed	3,494,641	255,050	3,749,691	3,296,542	316,560	3,613,102
Rye	2,081,628	420,468	2,502,097	4,839,260	31,516	4,870,776
Total Grain	**178,114,021**	**26,142,525**	**204,256,548**	**228,041,115**	**22,123,002**	**250,164,117**
				lb.	lb.	lb.
Mixed grains	-	-	-	8,961,608	4,320,494	13,282,102

34.—Canadian Grain Handled at Public Elevators in the East, by crop years ended Aug. 31, 1918 to 1922.

Years.	Wheat.	Oats.	Corn.	Barley.	Flax-seed.	Rye.	Mixed or other Grains.	Total Grain.	Mixed Grains.
RECEIPTS.	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.
1917-1918...	110,454,320	40,624,672	94,592	9,969,828	705,910	-	111,111	161,960,433	-
1918-1919...	133,693,991	10,180,477	27,909	16,552,857	807,145	391,273	-	161,653,652	-
1919-1920...	141,641,693	17,091,582	-	12,315,737	225,152	1,170,346	-	172,444,510	-
1920-1921...	99,222,288	56,920,476	-	15,122,141	933,160	1,322,315	-	173,520,380	445,796
1921-1922...	120,870,258	50,187,467	-	16,365,929	1,170,635	2,270,964	-	190,865,253	-
SHIPMENTS.									
1917-1918...	107,981,532	37,729,008	66,682	9,530,930	685,372	-	88,277	156,081,801	-
1918-1919...	131,576,569	9,142,955	27,909	15,169,320	807,145	391,272	-	157,115,170	-
1919-1920...	137,325,174	16,851,459	-	11,978,427	203,521	1,170,340	-	167,528,921	-
1920-1921...	98,073,242	52,455,177	-	14,707,981	870,279	1,298,940	-	167,405,619	-
1921-1922...	119,186,498	49,098,234	-	16,273,586	1,156,145	2,262,807	-	187,977,270	-

35.—Canadian Grain Handled in Public Elevators in the East, by classes of ports, during the crop year ended Aug. 31, 1922.

Ports.	Wheat.	Oats.	Barley.	Flax-seed.	Rye.	Total.
	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.
Georgian Bay Ports—						
On Hand	367,839	2,662,429	121,771	53,049	–	3,205,088
Receipts—Water	44,712,264	18,977,746	4,731,725	582,186	632,485	69,636,406
Total	45,080,103	21,640,175	4,853,496	635,235	632,485	72,841,494
Shipments—Rail	44,576,009	21,524,341	4,853,492	635,230	632,485	72,221,557
Water	43,980	–	–	–	–	43,980
In Store	460,083	115,814	–	–	–	575,897
Lower Lake Ports—						
On Hand	89,191	53,764	9,690	–	–	152,645
Receipts—Rail	12,676	49,049	–	–	–	61,725
Water	29,551,380	7,758,316	3,029,542	–	188,502	40,527,740
Total	29,653,247	8,861,129	3,039,232	–	188,502	40,742,110
Shipments—Rail	8,667,969	1,874,137	133,760	–	–	10,675,866
Water	20,814,036	5,600,601	2,905,472	–	188,502	29,508,611
In Store	171,225	386,383	–	–	–	557,608
St. Lawrence Ports—						
On Hand	686,612	1,749,086	282,696	9,828	23,379	2,751,601
Receipts—Rail	17,999,188	9,580,893	3,972,236	37,533	1,043,666	32,633,516
Water	20,911,530	7,142,042	3,306,631	488,039	313,376	32,161,618
Total	39,597,330	18,472,021	7,561,563	535,400	1,380,421	67,546,735
Shipments—Rail	6,350,497	5,991,121	298,299	512,949	36,862	13,189,728
Water	32,195,529	11,893,892	7,170,927	7,966	1,335,402	52,603,716
In Store	1,051,291	586,992	92,339	14,484	8,160	753,266
Seaboard Ports—						
On Hand	5,373	–	–	–	–	5,373
Receipts—Rail	6,534,205	2,214,142	911,638	–	69,556	9,729,541
Total	6,539,578	2,214,142	911,638	–	69,556	9,734,914
Shipments—Water	6,538,478	2,212,201	911,636	–	69,556	9,731,871
Rail	–	1,941	–	–	–	1,941
In Store	1,101	–	–	–	–	1,101

3.—Marketing of Live Stock and Animal Products.

The products of animal husbandry in Canada were valued in 1921 at about $485 million or somewhat less than half of the output of field husbandry. In gross value of product the slaughtering and meat packing industry, which is dependent chiefly on animal husbandry for its materials, was the most important single manufacturing industry in Canada during 1920 and second in 1921.

Historical Note.—*The French Régime.*—Cattle were introduced into Canada at the founding of the earliest permanent settlements. Champlain cut hay for the cattle in 1610, and a map published in 1613 showed a place where hay had been grown. The French King in his despatches of 1699 to the Governor of New France desired the Governor to foster the raising of cattle, as he hoped to draw supplies of beef from the colony for his troops in Europe. Early census figures indicate that the number of horned cattle in New France increased from 3,107 to 33,179 and of sheep from 85 to 19,815 between 1667 and 1734. The enumeration in 1734 showed 23,646 swine in the colony.

Early British Rule.—The number of cattle in Canada in 1765 was shown as 12,533 oxen, 14,732 young cattle, 22,748 cows, 28,022 sheep and 28,562 swine. Governor Carleton in his report on manufactures mentions the wool industry as one of the most important. Through the coming of Loyalists and the founding of new settlements in the Eastern Townships of Quebec and in Upper Canada, cattle were introduced into these sections of the country. The government distributed cows among the new settlers, together with implements and other necessary articles, in order to assist in establishing them in their new homes. The founding of the Red River settlement brought cattle west of the Great Lakes. In 1823 a herd

of 300 cattle was driven from the south and disposed of to the Red River colonists. In the five eastern colonies, which afterward constituted Canada, the number of cattle, during the period from 1784 to 1861, increased from 98,591 to 2,316,022, the sheep from 84,696 to 2,507,044 and the swine from 70,465 to 1,228,166.

The Industry in 1870-1900.—During the decade following Confederation, a distinctive feature was the expansion of the live stock and kindred industries. The exhaustion of the Eastern lands and the competition of the prairie gave warning against reliance on wheat. The soil and climate of Ontario and the Eastern Townships proved admirably adapted for the live stock and dairying industries. Factory methods for the manufacture of cheese were introduced, and steamship facilities for the shipment of cattle developed, whilst a demand in Great Britain for cattle and other animals had resulted from plague and bad weather. Until 1871 no shipments of live stock had been made from Canada to Great Britain, but ten years later 49,409 cattle and 80,222 sheep were exported to that market.

During the next decade, the live stock and dairying industries continued to expand. In 1891 exports of cattle to Great Britain amounted to 107,689, while the total exports of live animals were 117,761 cattle and 299,347 sheep. In 1892, however, the shipment of live cattle and sheep to Great Britain, where a few weeks' grazing gave a market finish, was seriously threatened by the embargo requiring slaughter at the port of entry. Canadian cattle had previously been exempted from this regulation, though it was applied to other cattle.

The pork packing industry had remained stationary throughout the 'eighties, the number of hogs slaughtered in 1876-7 not being reached again until 1890-1. The imposition of higher duties on meats in 1890, and the growing use of dairy by-products for feeding, helped both farmer and packer, and by 1895-6 the annual pack was six hundred thousand hogs. The transformation of flour milling by the introduction of the roller process, with the accompanying tendency to large scale production, had driven many small mills from the flour trade. These were glad to turn to the chopping of grain for feed purposes, and gave the farmer a second source of supply of feed for his animals.

The Modern Phase.—During the present century the separation between the farm and the manufacture and marketing of animal products has become more and more pronounced. Slaughtering at the factory instead of at the farm has become general and resulted in the development of a great industry. Similarly the manufacture of butter and cheese has become a factory rather than a farm operation, although the concentration of the dairying industry is not so marked as that of meat-packing. The growth of population, particularly in urban centres, provides a greatly increased market for commodities of all kinds, and is an important factor in the development of these industries.

Animals on Farms and their Disposal.—An examination of the data regarding the live stock on farms, collected in connection with the six decennial censuses, gives an idea of the growth of the live stock industry of Canada. The number of cattle on farms increased from 2,484,655 in 1871 to 8,391,424 in 1921. The growth was well maintained during the last decade, with an absolute increase of 1,741,442 cattle of all grades. The sheep industry, which had been steadily declining for five decades, effected a splendid recovery between 1911 and 1921. The number of sheep on Canadian farms during the last censal year was 3,196,078, which was slightly in excess of the previous high record of 3,155,509, attained in 1871. This recovery is also shown by the wool clip, which was 11,338,268 pounds in 1921, exceeding all previous records of the decennial census. If the survey is restricted to the six

censal years, the greatest activity in the hog industry occurred in 1911. When the records of 1911 and 1921 are compared, it is found that the number of swine on farms decreased by 366,944, the sales by 992,416 and the slaughterings by about 317,794.

The record collected through the censuses of animals on farms and animals killed or sold and wool sold, relate to the year preceding the census year. Up to 1901 the information collected showed the total number of animals killed or sold for slaughter or export, whereas in the censuses of 1911 and 1921 animals slaughtered on the farm were not included. A summary of the record taken in the censuses from 1871 to 1921 is given in Table 36.

36.—Animals on Farms and Killed or Sold by Farmers in Canada, by censal years, 1871-1921.

Years.	Animals on Farms.			Animals killed or sold and wool sold.			
	Cattle.	Sheep	Swine.	Cattle.	Sheep.	Swine.	Wool.
	No.	No.	No.	No.	No.	No.	lb.
1871	2,484,655	3,155,509	1,366,083	507,725	1,557,430	1,216,097	11,103,480
1881	3,382,396	3,048,678	1,207,619	657,681	1,496,465	1,302,503	11,300,736
1891	3,997,023	2,563,781	1,733,850	957,737	1,464,172	1,791,104	10,031,970
1901	5,446,944	2,510,568	2,332,902	1,086,353	1,329,141	2,497,636	10,550,769
1911[1]	6,649,982	2,227,916	3,691,235	1,752,792[2]	949,039[2]	2,771,755[2]	6,933,955
1921[1]	8,391,424	3,196,078	3,324,291	1,616,626[2]	1,027,975[2]	1,779,339[2]	11,338,268

[1]Census taken as of June 1, while previous censuses were taken earlier in the year, so that a greater number of young animals are included in 1911 and 1921.

[2]Animals slaughtered on farms were not included. Following figures are comparative with data given for previous years (the 1911 amounts are partly estimated).

	Cattle.	Sheep.	Swine.
1911	1,915,059	1,097,015	4,282,624
1921	2,095,959	1,217,993	2,972,413

In Table 37 are given statistics showing the index numbers of animals on farms for the years 1918 to 1922, expressed as a percentage of the average numbers for the quinquennium 1911-1915.

37.—Index Numbers of Animals on Farms in Canada from 1918 to 1922. (Average Number for 1911 to 1915 = 100).

Years.	Animals on Farms.				
	Horses.	Milch Cows.	Other Cattle.	Sheep.	Swine.
1918	128·0	133·2	176·4	145·6	125·8
1919	130·1	133·6	177·2	163·2	118·5
1920	120·6	132·0	164·5	177·5	103·1
1921	135·2	140·7	175·4	175·3	114·5
1922	129·4	141·0	164·7	155·7	114·8

Marketing developments, 1921-1922.—The marketings in Ontario and Quebec during 1921 were in total much the same as those of the previous year. The western provinces, however, marketed in 1921 a number of cattle equal to only 50 p.c. of the liquidation of the previous three years. This was not the result of a shortage in farm holdings, as the census of cattle in the western provinces in 1921 showed that there were 4,235,293 head as compared with 3,437,977 head in 1920. The cattle in 1922 were estimated at 3,996,568 head.

The restricted liquidation in 1921 was due to effort on the part of the western stock-grower to carry his stock over the period of extremely low prices in the autumn

and winter, in the hope of a better outlet later on. This policy was a reasonable one, but unfortunately its ultimate value, like all production policies in agriculture, was governed by climatic and crop conditions fully as much as by the nature of the market outlet. Early in 1922 climatic conditions in the west resulted in bare pastures and lack of water, and left the cattle grower no choice but to liquidate early. From July onward, the usual supplies were augmented by the entire holdover from the previous year, coupled with additional forced sales from the dried-up districts in the northern parts of Alberta and in some sections of Saskatchewan.

Notwithstanding the tremendous liquidation, however, the volume of supplies for 1923 was not estimated to be short of demand, excepting that the numbers of weighty finished cattle from the western provinces were smaller than formerly, as eastern feed lots contained a heavy number of prairie-grown cattle two years and up in process of finishing, which, under better western feed conditions, would have been retained in the hands of western feeders. It is quite true, however, that the districts in the prairie provinces which were fortunate in securing a good crop of coarse grains and roughage have continued to turn out a considerable quantity of stock well suited to the needs of the British feeder market and the United States butcher cattle trade, as well as the domestic demand.

As regards the province of Ontario, the live stock market in 1922 was much more satisfactory during the first half of the year than early indications had promised, but during the latter half trading was in a very depressed condition as a result of heavy supplies of stock from the prairies. Had the run of cattle from the West been nearer normal, prices in the provinces of Ontario and Quebec would have been unusually strong. As it was, the local supplies were forced to compete against heavy direct shipments from the West to packing plants and country points. However, the farmers of Ontario were afforded an excellent opportunity to purchase steers for winter feeding at very cheap rates, and western shippers have probably established a firmer market in the East than ever before for their unfinished cattle.

The sale of cattle at stock yards during 1922 was over 20 p.c. greater than during the previous year. The revenue from stock yards sales, in spite of lower prices, increased about $90,000 on cattle, $500,000 on calves, $3,000,000 on hogs and $500,000 on sheep.

The number of live stock marketed in different ways, through the stockyards, through the packers, or by direct shipment for export, is given for the calendar year 1922 in Table 38. In Table 39 are given the statistics of the number of animals marketed through the stockyards in 1922, by grades. The disposition of the live-stock so marketed is given in Table 40.

38.—Live Stock Marketed through Stockyards, Packers, etc., in several Provinces of Canada, 1922.

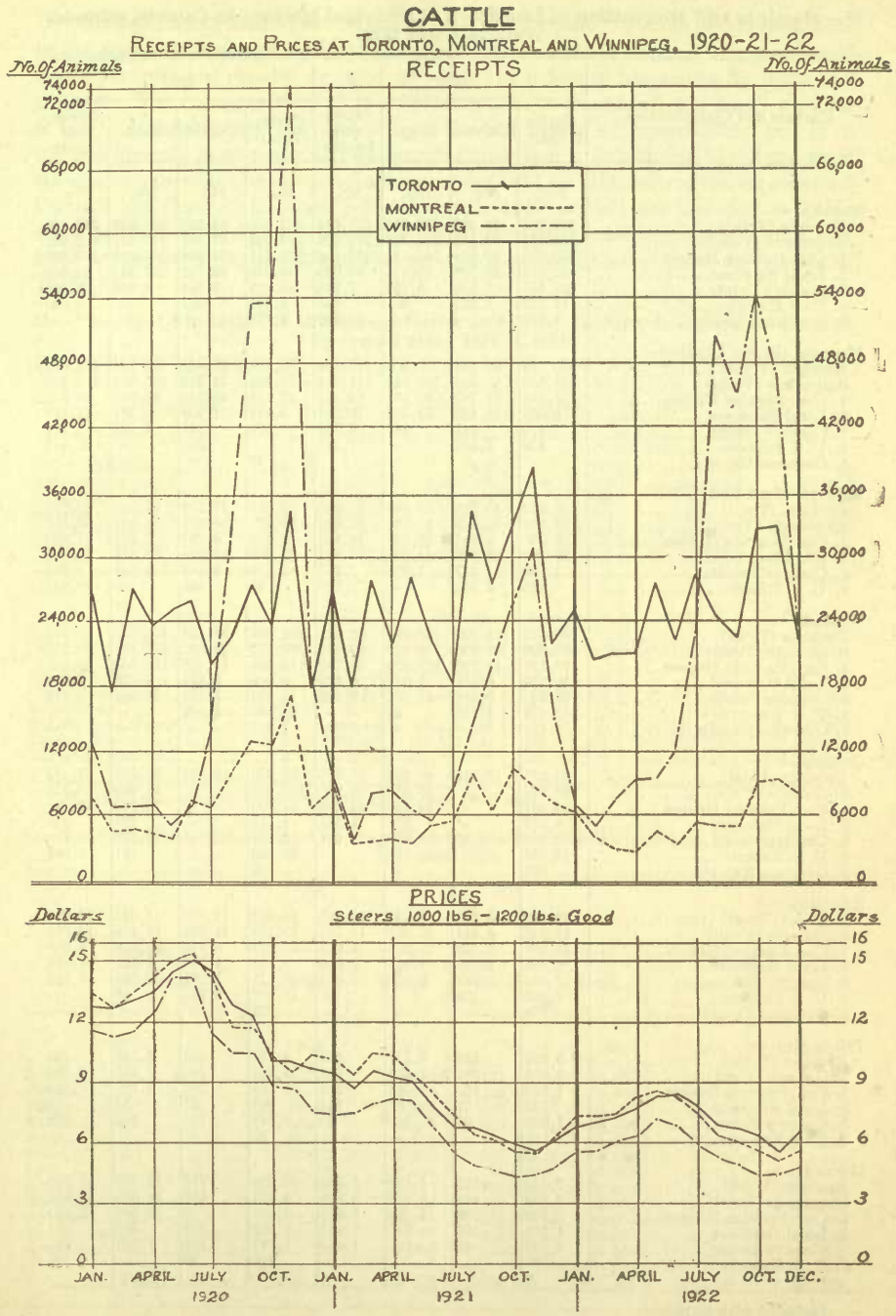
Live Stock.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	Canada.
	No.	No.	No.	No.	No.	No.
Cattle—						
Total to stockyards	21,431	284,188	88,171	172,369	252,173	818,332
Direct to packers	3,239	11,800	4,574	2,250	35,692	57,555
Direct to export	946	11,512	513	8,075	38,191	59,237
Total	**25,616**	**307,500**	**93,258**	**182,694**	**326,056**	**935,124**
Calves—						
Total to stockyards	62,751	127,616	14,902	14,037	35,842	255,148
Direct to packers	12,857	49,895	775	212	6,896	70,635
Direct to export	4,386	4,916	163	47	2,850	12,362
Total	**79,994**	**182,427**	**15,840**	**14,296**	**45,588**	**338,145**

38.—Live Stock Marketed through Stockyards, Packers, etc., in several Provinces of Canada, 1922—concluded.

Live Stock.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	Canada.
	No.	No.	No.	No.	No.	No.
Hogs—						
Total to stockyards	68,832	384,276	87,400	104,697	171,001	816,206
Direct to packers	17,977	695,629	16,125	17,907	223,016	970,654
Direct to export	13	365	2	–	881	1,261
Total	**86,822**	**1,080,270**	**103,527**	**122,604**	**394,898**	**1,788,121**
Sheep—						
Total to stockyards	178,648	218,649	29,586	32,269	89,186	548,338
Direct to packers	26,533	37,796	4,818	996	19,860	90,003
Direct to export	15,011	9,781	75	2,254	7,198	34,319
Total	**220,192**	**266,226**	**34,479**	**35,519**	**116,244**	**672,660**
Store Cattle purchased	2,487	98,899	14,815	10,676	40,483	167,360

39.—Grading of Live Stock Marketed at the Stockyards of Canada, by Provinces, calendar year 1922.

Grading of Live Stock.		Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	Canada.
		No.	No.	No.	No.	No.	No.
Cattle—							
Steers, 1,200 lbs. and up		38	22,386	2,220	8,872	17,488	51,004
Steers, 1,000–2,000 lbs.	Good	250	35,020	5,286	10,485	22,068	73,109
	Common	71	3,704	1,748	6,057	10,509	22,089
Steers, 700–1,000 lbs.	Good	339	36,467	3,309	3,319	5,087	48,521
	Common	1,612	15,268	1,489	2,559	3,708	24,636
Heifers	Good	89	36,738	4,613	7,385	13,127	61,953
	Fair	235	8,002	4,029	8,280	6,904	27,449
	Common	1,046	12,196	3,076	5,439	4,768	26,525
Cows	Good	204	26,799	6,566	9,650	16,849	60,068
	Common	1,671	26,906	7,477	12,461	17,646	66,161
Bulls	Good	70	4,189	934	891	1,405	7,489
	Common	1,848	6,051	1,219	1,389	1,393	11,900
Canners and cutters		1,762	9,112	6,439	9,085	12,339	38,737
Oxen		84	68	530	488	146	1,316
Stockers, 450–800 lbs.	Good	371	6,993	5,615	9,575	27,720	50,274
	Fair	112	6,515	7,572	11,454	21,629	47,282
Feeders, 800–1,100 lbs.	Good	–	7,267	11,185	29,068	38,818	86,338
	Fair	3	2,453	13,854	28,506	17,623	62,439
Unclassified cattle		11,628	18,054	1,010	7,406	12,946	51,042
Total		**21,431**	**284,188**	**88,171**	**172,369**	**252,173**	**818,332**
Calves—							
Beef		4	33,111	14,264	12,519	33,556	93,454
Dairy		20,666	64,612	2	150	170	85,600
Grass		9,848	5,429	604	1,208	1,633	18,722
Unclassified		32,233	24,464	32	160	483	57,372
Total		**62,751**	**127,616**	**14,902**	**14,037**	**35,842**	**255,148**
Hogs—							
Selects		25,443	327,311	69,053	79,046	134,779	635,632
Heavies		3,683	8,406	5,127	7,737	6,360	31,313
Lights		7,196	16,119	9,965	11,671	18,778	63,729
Sows		1,843	7,423	2,670	4,418	7,517	23,871
Stags		149	380	427	501	345	1,802
Unclassified		30,518	24,637	158	1,324	3,222	59,859
Total		**68,832**	**384,276**	**87,400**	**104,697**	**171,001**	**816,206**
Sheep and Lambs—							
Lambs	Good	51,810	157,333	14,538	9,844	42,984	276,509
	Common	39,348	17,464	3,700	4,539	2,084	67,135
Sheep	Heavy	46	2,236	–	246	110	2,638
	Light	4,783	29,260	8,316	11,181	26,300	79,840
	Common	6,477	6,098	2,703	4,099	4,003	23,380
	Unclassified	76,184	6,258	329	2,360	13,705	98,836
Total		**178,648**	**218,649**	**29,586**	**32,269**	**116,244**	**548,338**



NOTE.—Receipts and prices are indicated by months.

40.—Receipts and Disposition of Live Stock at Principal Markets in Canada, calendar years 1921 and 1922.

Markets and Classification.	1921.				1922.			
	Cattle (Total).	Calves.	Hogs.	Sheep and Lambs.	Cattle (Total).	Calves.	Hogs.	Sheep and Lambs.
	No.	No.	No.	No.	No.	No.	No.	No.
Toronto—								
Receipts (Total)	320,229	66,937	289,013	267,614	303,882	84,263	308,908	217,368
Shipments (Total)	324,551	67,580	306,422	270,626	336,935	87,968	315,431	216,981
1. Can. Packing Houses	233,285	40,926	250,344	197,696	205,741	53,954	253,599	152,648
2. Local Butchers	32,414	22,006	49,111	64,069	26,676	30,762	57,142	53,514
3. Country Points	38,358	2,958	6,765	7,536	60,239	2,869	4,690	8,166
4. U. S. Exports	11,575	1,690	202	995	4,905	383	–	2,653
5. Overseas Exports	8,919	–	–	330	9,374	–	–	–
Montreal (Pt. St. Charles)—								
Receipts (Total)	36,399	56,164	101;303	117,469	33,078	53,040	106,341	112,614
Shipments (Total)	37,240	52,395	102,548	114,481	34,626	51,929	105,056	116,700
1. Can. Packing Houses	26,786	34,747	80,652	82,112	27,116	43,346	94,560	84,842
2. Local Butchers	9,065	13,432	21,409	19,344	6,121	7,975	9,361	17,137
3. Country Points	979	818	487	5,794	1,373	341	1,135	1,277
4. U. S. Exports	410	3,398	–	7,231	–	267	–	13,444
5. Overseas Exports	–	–	–	–	16	–	–	–
Montreal (East End)—								
Receipts (Total)	38,972	46,725	61,386	62,946	34,021	57,336	58,450	83,094
Shipments (Total)	39,168	46,929	61,394	62,635	33,150	55,677	58,150	83,283
1. Can. Packing Houses	5,060	4,411	16,942	18,174	6,438	9,714	6,321	27,820
2. Local Butchers	32,002	38,068	43,032	37,907	23,696	43,674	50,811	40,041
3. Country Points	1,886	477	1,420	3,757	2,936	1,449	1,018	4,861
4. U. S. Exports	220	3,973	–	2,797	80	840	–	10,561
Winnipeg—								
Receipts (Total)	158,613	21,490	120,957	49,210	294,008	34,158	176,777	52,461
Shipments (Total)	158,808	21,500	120,422	49,045	293,711	34,340	177,284	51,270
1. Can. Packing Houses	73,524	11,270	103,029	33,750	119,666	17,407	150,503	39,662
2. Local Butchers	10,270	6,478	5,031	6,652	9,669	9,184	5,720	4,496
3. Country Points	29,562	2,594	12,282	8,643	74,967	3,331	21,061	7,112
4. U. S. Exports	40,978	1,158	80	–	88,348	4,408	–	–
5. Overseas Exports	4,474	–	–	–	1,061	–	–	–
Calgary—								
Receipts (Total)	80,027	13,215	48,535	68,807	89,610	16,313	82,583	61,141
Shipments (Total)	93,010	–	48,018	68,959	105,907	[1]	81,600	60,555
1. Can. Packing Houses	48,457	–	44,948	41,019	51,873	–	73,942	41,781
2. Local Butchers	2,037	–	235	1,326	1,513	–	424	643
3. Country Points	29,606	–	2,835	26,614	32,931	–	7,203	13,146
4. U. S. Exports	12,565	–	–	–	19,465	–	31	4,985
5. Overseas Exports	345	–	–	–	125	–	–	–
Edmonton—								
Receipts (Total)	39,742	5,298	35,341	10,399	88,432	12,827	71,047	15,206
Shipments (Total)	41,565	4,614	35,562	11,331	90,198	11,880	71,125	14,200
1. Can. Packing Houses	15,688	2,435	27,696	3,588	35,273	6,376	57,012	6,928
2. Local Butchers	4,036	1,093	1,805	3,800	3,451	1,148	1,382	3,446
3. Country Points	17,883	982	6,061	3,943	23,312	1,524	12,666	3,826
4. U. S. Exports	3,385	104	–	–	17,422	2,775	65	–
5. Overseas Exports	573	–	–	–	733	–	–	–
Prince Albert—								
Receipts (Total)	3,006	382	7,317	459	4,856	490	7,562	750
Shipments (Total)	3,056	384	7,488	455	4,841	490	7,446	750
1. Can. Packing Houses	1,842	292	7,044	264	1,468	275	6,722	460
2. Local Butchers	214	27	22	141	202	33	30	14
3. Country Points	1,000	65	422	50	3,144	182	694	276
4. U. S. Exports	–	–	–	–	27	–	–	–
Moose Jaw—								
Receipts (Total)	7,434	533	5,822	5,876	10,308	714	14,399	7,550
Shipments (Total)	7,524	484	5,822	5,869	9,975	686	14,693	5,853
1. Can. Packing Houses	2,970	256	4,296	3,553	3,597	5	13,359	3,810
2. Local Butchers	1,266	182	629	867	1,629	474	288	813
3. Country Points	3,288	46	897	1,449	3,751	181	1,046	983
4. U. S. Exports	–	–	–	–	998	20	–	247

[1] Included with Cattle.

Slaughtering and Meat Packing.——The tendency to large scale production in the industry is shown in the summary of census records below. The number of establishments has rapidly dropped off while the industry has grown by leaps and bounds. The concentration of the industry into a comparatively small number of large establishments has resulted in the utilization of by-products and in a marked increase in economy and efficiency of operation. In addition to the principal statistics reported in the decennial censuses from 1871 to 1911, annual figures collected through the Census of Industry for the years 1917 to 1921 are included in Table 41, whilst live stock slaughtered at Canadian inspected establishments in 1921 and 1922 are given in Table 42 and the *per capita* consumption of meat in Canada in Table 43.

41.—Principal Statistics of the Slaughtering and Meat Packing Industry of Canada by censal years 1871 to 1921.

Description.	1871.	1881.	1891.	1901.[1]	1911.[1]
Establishments.....No.	193	203	527	57	80
Capital Invested..... $	419,325	1,449,679	2,173,077	5,395,162	15,321,088
Employees.....No.	841	852	1,690	2,416	4,214
Salaries and Wages..... $	145,376	209,483	503,053	1,020,164	2,685,518
Cost of Materials..... $	2,942,786	3,163,576	5,554,246	19,520,058	40,951,761
Value of Products..... $	3,799,552	4,084,133	7,125,831	22,217,984	48,527,076

Description.	1917.	1918.	1919.	1920.	1921.
Establishments.....No.	79	78	82	86	84
Capital Invested..... $	85,189,611	86,969,756	93,363,791	84,288,306	58,459,555
Employees.....No.	10,312	11,917	13,222	11,978	9,711
Salaries and Wages..... $	9,440,402	12,173,389	15,302,388	16,691,471	13,547,778
Cost of Materials..... $	155,866,320	171,023,104	175,133,821	170,916,888	113,389,835
Value of Products..... $	206,720,718	229,231,666	233,936,913	240,544,618	153,136,289

[1]Includes only establishments employing five hands and over.

42.—Live Stock slaughtered at Canadian inspected Establishments, by months, 1921 and 1922.

Months.	1921.			1922.		
	Cattle.	Sheep.	Swine.	Cattle.	Sheep.	Swine.
	No.	No.	No.	No.	No.	No.
January.....	51,769	24,623	151,397	44,845	20,259	168,988
February.....	31,272	15,450	128,337	39,568	14,180	144,398
March.....	50,496	9,850	120,367	64,149	11,366	159,142
April.....	49,438	4,645	115,479	78,841	7,150	154,691
May.....	61,250	10,693	145,036	81,633	16,088	160,920
June.....	60,821	28,634	122,022	64,680	32,184	152,146
July.....	46,959	42,263	94,695	57,665	44,913	120,779
August.....	65,708	78,541	107,980	72,466	86,488	125,815
September.....	67,946	123,924	100,667	80,544	112,243	130,943
October.....	76,944	151,941	155,897	96,239	131,537	176,597
November.....	90,498	113,486	204,683	90,095	81,164	230,455
December.....	62,212	42,900	189,829	60,976	38,831	202,338
Total.....	**715,313**	**646,950**	**1,636,389**	**831,701**	**596,403**	**1,927,212**

43.—Total and per Capita consumption of Meats in Canada, per Annum, calendar years 1919-1922.

BEEF.

Items.		1919.	1920.	1921.	1922.
Slaughtered in Canada—					
Cattle	No.	1,437,539	1,329,105	1,512,878	1,392,564
Calves	"	453,640	446,737	503,646	506,638
Total	"	1,891,179	1,775,842	2,016,524	1,899,202
Estimated Dressed Weight—					
Cattle	lb.	560,640,210	598,097,250	605,151,200	626,653,800
Calves	"	45,817,640	44,673,700	50,364,600	50,663,800
Total	"	606,457,850	642,770,950	655,515,800	677,317,600
Net Exports of Beef	"	111,479,699	63,364,556	31,576,671	25,371,434
Total Consumption	"	494,978,151	579,406,394	623,939,129	651,946,166
Population	No.	8,478,546	8,631,475	8,788,483	8,966,834
Consumption per Capita	lb.	58·38	67·13	70·99	72·71

PORK.

Slaughtered in Canada	No.	5,525,718	4,834,150	5,366,211	5,382,196
Estimated Dressed Weight	lb.	690,714,750	638,107,800	708,339,852	701,449,872
Net Exports of Pork	"	197,417,471	76,100,050	53,006,245	48,472,546
Total Consumption	"	493,297,279	562,007,750	655,333,607	661,977,326
Population	No.	8,478,546	8,631,475	8,788,483	8,966,834
Consumption per Capita	lb.	58·18	65·11	74·57	73·83

MUTTON AND LAMB.

Slaughtered in Canada—					
Mature Animals	No.	1,020,141	1,119,854	1,176,686	1,038,997
Lambs	"	340,047	373,285	392,228	346,332
Total	"	1,360,188	1,493,139	1,568,914	1,385,329
Estimated Dressed Weight—					
Mature Animals	lb.	76,510,575	83,989,050	88,251,450	77,924,775
Lambs	"	11,901,645	13,064,975	13,727,980	12,121,620
Total	"	88,412,220	97,054,025	101,979,430	90,046,395
Net Exports or Imports	"	+ 1,064,185	−1,256,137	−2,161,987	−2,627,375
Total Consumption	"	89,476,405	95,797,888	99,817,443	87,419,020
Population	No.	8,478,546	8,631,475	8,788,483	8,966,834
Consumption per Capita	lb.	10·55	11·10	11·36	9·75

SUMMARY.

Beef	lb.	58·38	67·13	70·99	72·71
Pork	"	58·18	65·11	74·57	73·83
Mutton and Lamb	"	10·55	11·10	11·36	9·75
Total	"	127·11	143·34	156·92	156·29

Export Trade.—With the development of factory methods and large scale production in the manufacture of animal and dairy products, a very considerable export trade in these commodities has been developed, in addition to the trade in live animals. Canadian exports of animals and animal products, compiled on a classification according to origin, reached a total value of $162,978,102 during the fiscal year ended March 31, 1921, and of $107,605,123 during the following year. The exports of bacon and ham during the fiscal year ended March 31, 1923, were 101,590,100 lbs., valued at $22,536,397, representing an increase in quantity of 2·4 p.c. over the previous year. Cheese, to the amount of 114,548,900 lbs., valued at

$20,828,234, was exported in the fiscal year 1922-23, as compared with 133,849,800 lbs. valued at $25,440,322 in the previous year.

44.—Summary of Interprovincial and Export Shipments of Meats for fiscal year, 1921-1922.

Fiscal Year, 1921-22.	Beef.	Veal.	Mutton and Lamb.	Pork fresh.	Pork Cured.	Miscellaneous.	Total.
		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
PRINCE EDWARD ISLAND—							
Shipments to other provinces	80	–	205,783	91,503	221,873	7,600	526,839
Exports	11,854	–	351,091	34,071	69,630	15,445	482,091
Total shipments out of province	11,934	–	556,874	125,574	291,503	23,045	1,008,930
NOVA SCOTIA—							
Shipments to other provinces	–	–	–	–	–	–	–
Exports	80,213	–	4,392	29,258	70,341	34,640	218,844
Total shipments out of Province	80,213	–	4,392	29,258	70,341	34,640	218,844
NEW BRUNSWICK—							
Shipments to other provinces	34,797	–	29,775	33,004	–	63,126	160,702
Exports	2,230	–	–	–	273,865	–	276,095
Total shipments out of province	37,027	–	29,775	33,004	273,865	63,126	436,797
QUEBEC—							
Shipments to other provinces	795,526	47,769	163,510	405,695	1,103,023	11,239,043	13,754,566
Exports	2,228,224	2,266,400	1,761,610	125,062	9,170,396	337,653	15,889,345
Total shipments out of province	3,023,750	2,314,169	1,925,120	530,757	10,273,419	11,576,696	29,643,911
ONTARIO—							
Shipments to other provinces	36,040,529	257,512	345,436	2,927,442	9,876,154	29,209,978	78,657,051
Exports	14,871,917	2,232,009	4,872,974	708,688	87,588,082	11,936,411	122,210,081
Total shipments out of province	50,912,446	2,489,521	5,218,410	3,636,130	97,464,236	41,146,389	200,867,132
MANITOBA—							
Shipments to other provinces	5,406,435	230,031	153,685	324,727	3,037,337	9,757,198	18,909,413
Exports	9,075,546	130,082	23,047	125,563	624,597	363,728	5,442,563
Total shipments out of province	14,481,981	360,113	176,732	450,290	3,661,934	10,120,926	24,351,976
SASKATCHEWAN—							
Shipments to other provinces	46,310	–	–	1,525	70,342	404,598	522,775
Exports	–	–	–	–	–	–	–
Total shipments out of province	46,310	–	–	1,525	70,342	404,598	522,875
ALBERTA—							
Shipments to other provinces	1,186,714	118,263	181,066	136,767	433,355	6,861,799	8,917,964
Exports	1,097,700	–	–	131,648	503,756	158,847	1,891,951
Total shipments out of province	2,284,414	118,263	181,066	268,415	937,111	7,020,646	10,809,915
BRITISH COLUMBIA—							
Shipments to other provinces	39,960	–	–	–	–	6,000	45,960
Exports	52,188	–	–	–	186,100	–	238,288
Total shipments out of province	92,148	–	–	–	186,100	6,000	284,248

Conclusion.—In whatever market Canadian surplus live stock is sold in future, early maturity, good type and grain feeding will be the greatest selling factors.

While the world's needs for grain are already being met, it is not likely that there will be for many years to come any danger of over-production of choice sorts of beef. The world's live stock industry is now suffering from an over-supply of poorly fed and to some extent poorly bred cattle. Canada is both capable of producing a heavy beef surplus and in a position to grain-finish her export supplies. Live stock is the medium through which fodder and coarse grain crops are marketed, yet the live stock districts in Canada are marketing only small amounts of good quality beef, pork and mutton. Lack of proper feeding appears to be more general than lack of good breeding.

4.—Cold Storage.

Cold Storage Warehouses.—Under the Cold Storage Act, 1907 (6-7 Edw. VII, c. 6), subsidies have been granted by the Dominion Government towards the construction and equipment of cold storage warehouses open to the public, the Act and regulations made thereunder being administered by the Department of Agriculture. Table 45 shows for 1923 the number of cold storage warehouses in Canada, with the refrigerated space. This amounts to 36,532,492 cubic feet, of which 5,244,358 cubic feet apply to warehouses subsidized under the Act and 31,288,134 cubic feet apply to non-subsidized warehouses.

45.—Cold Storage Warehouses in Canada, 1923.

SUBSIDIZED PUBLIC WAREHOUSES.

Provinces.	Number.	Refrigerated space.	Cost.	Total subsidy.
		Cubic feet.	$	$
Prince Edward Island	1	200,000	50,000	15,000
Nova Scotia	3	571,440	287,237	78,171
New Brunswick	2	781,161	192,577	57,773
Quebec	2	248,394	245,287	73,586
Ontario	16	1,739,944	632,547	183,740
Manitoba	1	27,500	32,000	9,600
Saskatchewan	4	437,596	268,707	80,612
Alberta	2	351,159	242,000	72,600
British Columbia	3	887,164	458,000	137,400
Total subsidized	**34**	**5,244,358**	**2,408,355**	**708,482**

SUBSIDIZED AND NON-SUBSIDIZED WAREHOUSES.

Provinces.	No.	Refrigerated space.	Articles Stored.
		Cubic feet.	
Prince Edward Island	4	241,700	1 Bait and Fish, 1 Eggs, 1 Fox Meat and Meat, 1 Meat and General.
Nova Scotia	19	1,110,554	4 Bait and Fish, 1 Butter, 3 Butter and Ice Cream, 1 Dairy Produce, Fish and Meat, 1 Eggs, 4 Fish, 3 Fish and Meat, 1 General, 1 Meat and Produce.
New Brunswick	24	975,391	18 Bait and Fish, 1 Butter, Eggs and Ice Cream, 1 Cured Meat, 1 Eggs, 2 General, 1 Meat and Poultry.

45.—Cold Storage Warehouses in Canada, 1923—concluded.

SUBSIDIZED AND NON-SUBSIDIZED WAREHOUSES—concluded.

Provinces.	No.	Refrigerated space.	Articles Stored.
		Cubic feet.	
Quebec	61	7,693,354	1 Butter, 1 Butter and Eggs, 1 Butter, Eggs and Meat, 4 Butter and Ice Cream, 1 Butter and Meat, 2 Cured Meat, 2 Fresh and Cured Meat, 5 Dairy Produce, 1 Dairy Produce, Eggs and Meat, 4 Dairy Produce and Meat, 2 Packing House and Dairy Products, 3 Fish, 1 Fish, Meat and Poultry, 10 General, 4 General Produce, 9 Meat, 1 Meat, and General, 3 Meat and General Produce, 2 Meat Products, 3 Meat and Poultry, 1 Meat, Poultry and General Produce.
Ontario	139	11,649,024	22 Butter, 1 Butter and Cheese, 2 Butter and Dairy Produce, 3 Butter and Eggs, 1 Butter, Eggs and General, 1 Butter, Eggs and Meat, 2 Butter, Eggs and Poultry, 1 Butter and Farm Produce, 1 Butter and General, 16 Butter and Ice Cream, 1 Butter and Meat, 1 Butter and Milk, 1 Cheese and Meat, 4 Cured Meat, 1 Cured Meat and Fish, 1 Dairy Produce and Eggs, 4 Dairy Produce, Eggs and Meat, 1 Dairy and Farm Produce, 1 Dairy Produce and Meat, 1 Dairy Produce, Meat and Poultry, 1 Eggs, 6 Eggs and General, 12 Fish, 1 Fish and Fruit, 1 Fish and General, 2 Fish and Meat, 2 Fish, Meat and General, 4 Fruit, 4 Fruit and Jam, 1 Fruit and Meat, 1 Fruit and Meat Products, 1 Fruit and Vegetables, 16 General, 3 General Produce, 1 Hog Products, 2 Ice Cream, 5 Meat, 4 Meat and General, 2 Milk, Ice Cream and Butter, 4 Packing House and Dairy Products.
Manitoba	42	4,006,147	2 Butter, 5 Butter and Ice Cream, 1 Butter and Meat, 1 Dairy Produce and Vegetables, 2 Dairy Products and Meat, 15 Fish, 1 Fish and Poultry, 5 General, 1 General Produce, 6 Meat, 1 Meat and General, 1 Meat and General Produce, 1 Packing House Products.
Saskatchewan	35	1,851,512	7 Butter, 1 Butter, Eggs and Meat, 8 Butter and Ice Cream, 1 Eggs and General, 3 Fish, Meat and General Produce, 6 General, 3 General Produce, 1 Meat, 1 Meat and General, 2 Meat and General Produce, 1 Milk, Ice Cream and Butter, 1 Packing House Products.
Alberta	21	3,809,835	2 Butter, 5 Butter and Ice Cream, 1 Eggs and Fruit, 1 Fish, Meat and General Produce, 1 Fish, Meat and Poultry, 3 General, 4 Meat, 4 Packing House Products.
British Columbia	49	5,150,075	6 Butter, 2 Butter and General, 1 Butter and General Produce, 3 Butter and Ice Cream, 1 Butter and Meat, 9 Fish, 1 Fish and General, 2 Fish and Meat, 4 Fish, Meat and General Produce, 2 Fruit, 1 Fruit and Jam, 7 General, 4 Meat, 2 Meat and General, 2 Packing House Products, 1 Packing House Products and Eggs, 1 Packing House Products and General.
Yukon	1	44,900	1 Fish.
Totals	395	**36,532,492**	

Cold Storage Stocks.—Statistics of the stocks of food in the cold storage warehouses of Canada are collected and published monthly by the Internal Trade Branch of the Dominion Bureau of Statistics. A summary of the cold storage data is included in the report on "Live Stock and Animal Products Statistics," published annually. Judging by the average of the stocks on hand on the first of each month,

the cold storage holdings of eggs during 1922 recorded the marked increase of 35 p.c. over the previous year. The cold storage stocks of butter and cheese increased 4 p.c. and 5 p.c. respectively during the same period. In Table 46 are included statistics by months for 1922 of the stocks of food in cold storage and in process of cure, for various important commodities.

46.—Stocks of Food on Hand in Cold Storage and in Process of Cure, by Months and Commodities, 1922.[1]

Months.	Eggs.	Butter.	Cheese.	Beef.		
				Fresh.	Cured.	In process of cure.
	Dozen.	lbs.	lbs.	lbs.	lbs.	lbs.
1922.						
January	1,988,884	11,629,530	15,540,495	25,682,928	245,369	162,366
February	1,152,357	9,352,465	10,534,795	22,640,709	298,202	158,646
March	810,967	6,124,693	6,761,636	19,542,669	275,717	168,204
April	1,460,963	2,421,196	4,364,842	17,817,092	246,736	165,979
May	5,293,870	1,148,456	3,876,236	12,119,923	236,502	201,624
June	12,241,551	2,955,217	5,917,657	13,206,940	198,565	207,677
July	16,772,355	10,669,213	9,396,300	9,824,741	193,394	192,183
August	18,095,237	19,038,027	16,783,349	8,606,593	96,845	183,854
September	17,674,376	24,565,660	21,176,909	10,198,710	138,524	268,542
October	16,254,901	24,635,390	18,524,404	15,150,520	222,733	128,989
November	11,034,395	25,049,425	9,728,665	22,052,122	144,557	133,212
December	6,533,199	19,897,626	8,337,763	27,922,352	160,429	210,872
1923.						
January	3,351,243	14,645,599	5,178,881	25,255,609	1,354,676	232,849

Months.	Pork.			Lard.	Mutton and Lamb.	Oleo-margarine.	Poultry.
	Fresh.	Cured.	In process of cure.				
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1922.							
January	7,659,931	6,502,165	10,625,201	1,880,618	6,596,869	216,555	5,393,666
February	10,526,290	6,345,701	10,623,563	1,845,722	5,022,557	211,415	5,282,226
March	10,263,059	11,192,075	7,027,997	1,780,337	4,071,456	345,688	4,816,766
April	11,207,913	8,192,622	10,772,445	2,427,680	2,725,114	164,665	3,487,143
May	12,403,311	7,694,162	10,434,378	2,787,202	1,444,055	112,363	2,699,155
June	10,612,606	7,963,823	10,235,881	2,607,518	852,720	122,115	2,037,167
July	9,140,481	8,372,596	10,421,230	2,718,200	603,763	238,080	1,420,857
August	9,569,018	7,414,934	11,800,842	2,976,801	591,428	122,595	1,069,235
September	6,705,942	8,157,212	10,091,124	1,695,048	820,950	113,977	733,636
October	4,250,096	8,200,746	7,512,505	1,610,959	1,277,160	134,655	785,432
November	4,554,205	4,788,154	9,842,933	1,690,052	4,508,045	252,782	1,237,911
December	8,238,002	9,144,622	7,708,025	2,043,269	6,264,431	205,270	2,795,674
1923.							
January	10,550,966	10,461,605	7,663,737	2,439,533	6,461,717	195,535	5,984,932

[1] Figures in this table are of stocks on hand on the first of each month.

5 —Coal.

In addition to the statistics of the supply and distribution of coal which are summarized in the Mines and Minerals section of the Year Book, the Internal Trade Branch of the Dominion Bureau of Statistics receives a monthly return from wholesale and retail dealers throughout Canada, showing receipts and stocks on hand, together with a statement of cost at the mine, with transportation and incidental charges, as well as prices. A monthly compilation of the return is made, stocks in store being compiled monthly for seaboard points and quarterly for the whole country. The distribution of coal by the retail dealers in Canada declined from 5·7 million tons in 1921 to 4·7 million tons in the following year. The provincial distribution through retail dealers for the two years is given in Table 47, and the average yearly retail prices from 1920 to 1922 for the principal cities are presented in Table 48.

47.—Distribution of Coal through Retail Dealers, by Provinces, 1921 and 1922.
(Short tons).

Provinces.	Years.	Anthracite Coal From		Bituminous Coal From		Canadian Bituminous, Lignite and others.	Total.
		United States.	Great Britain.	United States.	Great Britain.		
Nova Scotia	1921	43,931	–	–	–	162,426	**206,357**
	1922	19,807	3,964	2,701	–	171,407	**197,879**
New Brunswick	1921	64,957	–	15,280	–	95,466	**175,703**
	1922	21,411	2,373	5,873	283	97,111	**127,051**
Prince Edward Island	1921	4,356	–	–	–	26,454	**30,810**
	1922	8,007	–	–	–	39,480	**47,487**
Quebec	1921	856,462	–	176,539	–	56,001	**1,089,002**
	1922	538,146	8,314	370,467	11,802	113,779	**1,042,508**
Ontario	1921	2,101,410	–	448,794	–	15,036	**2,565,240**
	1922	995,398	22,297	519,705	302	28,348	**1,566,050**
Manitoba	1921	61,774	–	33,127	–	230,165	**325,056**
	1922	45,436	–	65,237	–	273,264	**383,937**
Saskatchewan	1921	20,411	–	2,544	–	575,855	**598,810**
	1922	12,985	–	2,280	–	616,378	**631,643**
Alberta	1921	4,219	–	252	–	372,000	**376,471**
	1922	1,281	–	27	–	343,389	**344,697**
British Columbia	1921	3,601	–	1,128	–	289,527	**294,256**
	1922	3,994	–	10,716	–	356,256	**370,966**
Canada	**1921**	**3,161,121**	–	**677,664**	–	**1,822,930**	**5,661,715**
	1922	**1,646,465**	**36,948**	**977,006**	**12,387**	**2,039,412**	**4,712,218**

48.—Yearly Average Retail Prices of Coal in Canada, by Principal Municipalities, 1920, 1921 and 1922.

Province and Municipality.	Anthracite.			Bituminous.		
	1920.	1921.	1922.	1920.	1921.	1922.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
NOVA SCOTIA—						
Sydney	–	–	–	7 15	7 20	–
New Glasgow	11 55	–	–	7 89	7 75	–
Amherst	24 25	20 75	19 00	11 89	11 75	8 82
Halifax	20 14	18 75	17 14	12 32	10 59	9 59
Truro	14 25	18 50	–	11 00	11 93	10 55
PRINCE EDWARD ISLAND—						
Charlottetown	20 04	21 70	18 00	11 71	9 97	8 26
NEW BRUNSWICK—						
Moncton	22 00	18 75	19 00	10 76	11 99	10 70
St. John	19 65	18 60	16 57	13 29	12 61	11 21
Fredericton	18 23	18 70	18 09	12 00	12 72	9 13
Bathurst	17 92	20 46	22 00	11 46	11 68	10 39
QUEBEC—						
Quebec	16 38	17 38	17 81	14 00	12 64	11 42
Three Rivers	16 67	18 55	16 51	13 67	13 10	10 62
Sherbrooke	15 93	16 75	16 93	14 08	15 67	–
Sorel	16 42	16 30	16 36	14 38	12 52	11 06
St. Hyacinthe	16 46	16 09	15 47	–	11 95	11 58
St. Johns	15 33	18 00	15 76	9 83	12 00	11 73
Thetford Mines	15 35	19 67	–	17 07	–	–
Montreal	15 94	16 98	16 78	12 75	11 98	9 45
Hull	15 17	17 00	16 44	16 44	13 70	12 90

48.—Yearly Average Retail Prices of Coal in Canada, by Principal Municipalities, 1920, 1921 and 1922—concluded.

Province and Municipality.	Anthracite.			Bituminous.		
	1920.	1921.	1922.	1920.	1921.	1922.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
ONTARIO—						
Ottawa	15 13	16 98	16 44	15 87	12 78	11 01
Brockville	14 73	16 08	15 98	–	9 47	10 45
Kingston	14 85	16 50	16 61	11 79	10 93	10 64
Belleville	15 20	16 75	15 98	13 65	13 80	10 70
Peterborough	17 00	16 75	16 33	14 67	11 87	12 93
Orillia	17 01	16 85	16 79	12 92	12 03	12 03
Toronto	14 18	15 64	15 65	–	10 20	10 92
Niagara Falls	14 00	15 54	14 84	11 13	10 10	10 53
St. Catharines	15 04	15 90	15 49	–	11 29	12 90
Hamilton	15 95	15 93	15 65	13 08	9 92	9 15
Brantford	15 92	16 27	15 73	12 29	12 38	11 65
Galt	16 80	16 30	15 81	16 47	11 50	11 73
Guelph	17 04	16 39	15 83	13 88	12 15	12 16
Kitchener	16 38	16 35	16 11	13 20	12 43	11 43
Woodstock	16 00	16 35	15 76	13 25	11 78	10 70
Stratford	16 33	16 79	16 27	16 23	13 54	12 78
London	16 85	16 93	16 52	15 25	11 10	9 25
St. Thomas	16 75	17 50	16 58	13 50	14 17	12 68
Chatham	16 88	18 09	16 24	13 08	14 73	12 79
Windsor	18 08	18 21	16 67	12 36	13 12	11 46
Owen Sound	16 25	17 21	16 53	11 70	11 81	10 35
Cobalt	19 29	23 67	–	19 50	17 67	–
Sault Ste. Marie	16 13	18 39	17 41	12 38	12 64	11 07
Port Arthur	17 25	18 84	17 96	13 76	13 22	12 22
Fort William	17 45	18 78	18 25	13 73	12 97	10 65
MANITOBA—						
Winnipeg	19 70	21 32	21 36	13 83	14 35	12 05
Brandon	20 54	23 19	22 56	13 00	15 05	13 90
SASKATCHEWAN—						
Regina	21 83	21 63	25 16	12 47	13 20	11 85
Prince Albert	22 77	24 44	–	13 04	12 73	11 20
Saskatoon	24 25	24 73	25 80	11 92	13 89	11 16
Moose Jaw	23 00	18 17	18 45	11 92	12 54	12 21
ALBERTA—						
Edmonton	–	–	–	7 08	7 75	–
Calgary	–	12 95	13 98	9 50	10 10	9 39
Lethbridge	–	–	–	7 71	8 58	–
BRITISH COLUMBIA—						
Fernie	–	–	–	6 69	7 63	–
Nelson	15 33	16 25	17 00	12 08	13 17	12 78
Trail	–	–	–	12 03	11 95	12 64
New Westminster	15 31	15 25	–	12 93	14 50	10 37
Vancouver	17 80	17 93	20 62	14 00	11 50	9 20
Victoria	–	–	–	13 23	13 19	9 85
Nanaimo	–	–	–	9 23	9 20	–
Prince Rupert	–	–	–	15 06	11 90	11 83

6.—Bounties, Patents, Copyrights and Trade Marks.

Bounties.—The only bounties paid by the Dominion Government in 1922-23 were for the production of crude petroleum and linen yarns. Bounties on iron and steel ceased in 1911, in lead in 1918, on zinc in 1921, and on linen yarns in 1923. The total paid on lead bounties from 1899 to 1918 amounted to $1,979,216 for 1,187,169,878 lbs. of lead.[1] For crude petroleum the amount paid in 1923 was $89,223 on 5,948,207 imperial gallons, being at the rate of 1½ cents per gallon and making the total paid from 1905 to 1923, $3,302,361 on 220,157,426 gallons. Zinc bounties were granted under the provisions of 8-9 Geo. V, c. 51, not to exceed

[1]Statistics of bounties paid on lead are given by years on p. 454 of the 1920 Year Book.

$400,000 to July 31, 1920. The bounty paid equalled the difference between the standard market price of zinc and 9 c. per lb. There was paid in 1918-19 the sum of $108,563 on 10,107,704 lb. of zinc sold; in 1919-20 there was paid $249,246 on 15,186,694 lb. and in 1920-21 there was paid $42,191 on 3,635,199 lb. The total amount paid was $400,000 on 28,929,597 lb.

The total amount of bounties paid from 1896 to 1923 was $22,852,889; of this amount $16,785,827 was for iron and steel, $1,979,216 for lead, $3,302,361 for crude petroleum (Table 49), $367,962 for manila fibre, $400,000 for zinc, and $17,523 for linen yarns from 1921 to 1923. The Year Book of 1915, pages 459 and 460, gave a description of the bounties that have been payable since 1883, as well as tables showing for each commodity the quantities on which bounties were annually paid, and the amounts of such bounties for the years 1896 to 1915 inclusive.

49.—Bounties paid in Canada on Crude Petroleum, 1905-1923.

Fiscal Years.	Quantity.	Bounty.	Fiscal Years.	Quantity.	Bounty.
	gal.	$		gal.	$
1905	23,336,478	350,047	1915	7,685,127	115,277
1906	19,410,480	291,157	1916	7,278,452	109,177
1907[1]	17,770,205	266,553	1917	6,761,885	101,428
1908	26,081,139	391,217	1918	7,566,457	113,497
1909	17,379,871	260,698	1919	10,812,482	162,187
1910	13,572,587	203,589	1920	6,887,498	103,312
1911	10,706,418	160,596	1921	6,784,333	101,765
1912	9,462,380	141,936	1922	6,262,441	93,937
1913	8,616,767	129,252	1923	5,948,207	89,223
1914	7,834,219	117,513			
			Total	220,157,426	3,302,361

[1]Nine months.

Patents.—Letters patent, which in England have been in the gift of the Crown from the time of the Statute of Monopolies and beyond, are in Canada a purely statutory grant and have been so from the first. The earliest Act is one of Lower Canada, passed in 1824, wherein provision is made for the granting of patent rights to inventors who are British subjects and inhabitants of the province. Upper Canada passed its Act in 1826 and Nova Scotia and New Brunswick passed theirs at later dates. After the Union a consolidating act was passed in 1849, applying to both Upper and Lower Canada, and the B.N.A. Act assigned the granting of patents exclusively to the Parliament of Canada. The Dominion Patent Act of 1869 repealed the provincial Acts and has formed the basis of all succeeding Acts.

The Patent Act as it now stands (13-14 Geo. V, c. 23), provides in section 7 that "Any person who has invented any new and useful art, process, machine, manufacture or composition of matter . . . . not known or used by any other person before his invention thereof, and . . . . . not in public use or on sale with the consent or allowance of the inventor thereof, for more than two years previous to his application for patent therefor in Canada, may . . . obtain a patent granting to such person an exclusive property in such invention." The exclusive right in the patent has duration for eighteen years.

The first Canadian patent was issued under the Lower Canada Act of 1824 to Noah Cushing of Quebec. 165 patents were granted under the Acts of Upper and Lower Canada, and under the consolidating and later Acts of the provinces of Canada 3,160 patents were granted. The growth of invention is shown by the fact that, in 1921 alone, 1,645 Canadian patents were issued to Canadians by the Patent Office.

Applications for patents in Canada from inventors in other countries were first received in 1872. In that year the total number of applications for patents made to the Canadian Patent Office, Department of Agriculture, was 752, and the total fees amounted to $18,652. The business of the Office has gradually continued to expand and the number of applications and total fees increased each year without a break from the beginning of the present century until the fiscal year ended March 31, 1913, when 8,681 applications were received, and the total fees amounted to $218,125. In 1923 there were 10,806 applications with fees amounting to $413,238, as compared with 12,274 and $380,207 respectively in 1922. For the fiscal year ended March 31, 1923, the number of patents granted was 12,542, as compared with 7,393 in 1922. Of the patents granted, 8,405, or 67·01 p.c., were issued to United States inventors, 2,021 to Canadian and 939 to British patentees, while Germany with 299, France with 203 and Australia with 150 patents, came next in number of patents issued. Table **50** shows the distribution of the Canadian patentees by province of residence for the years 1913 to 1923.

50.—Number of Canadian Patentees, by Province of Residence, for the fiscal years 1913-1923.

Provinces.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Prince Edward Island	4	2	2	3	3	3	–	9	2	4	9
Nova Scotia	20	39	33	21	29	18	21	29	29	22	35
New Brunswick	25	30	20	17	29	14	9	22	33	14	21
Quebec	277	278	278	237	287	220	172	312	331	276	430
Ontario	584	607	586	540	465	398	386	636	708	508	845
Manitoba	105	115	97	89	84	91	66	86	118	75	158
Saskatchewan	58	59	66	65	62	84	76	94	119	101	166
Alberta	61	46	71	60	59	61	75	116	127	96	155
British Columbia	122	157	126	92	72	83	70	147	177	103	202
Territories and Yukon	–	1	2	1	1	1	–	–	1	–	–
Totals	**1,256**	**1,334**	**1,281**	**1,125**	**1,091**	**973**	**875**	**1,451**	**1,645**	**1,199**	**2,021**

It will be seen from the table that the more populous provinces of Ontario and Quebec obtained the largest absolute number of patents, but a calculation of the number of patentees in relation to the census population shows that for the fiscal year 1923 the greatest relative inventiveness was displayed in British Columbia. Thus in this province, in 1923, one patent was granted to every 2,740 persons, the other provinces, as regards the number of persons to each patent granted, being placed in order as follows: Ontario, 3,585; Manitoba, 4,069; Alberta, 4,092; Saskatchewan, 4,905; Quebec, 5,683; P.E. Island, 9,778; Nova Scotia, 15,216 and New Brunswick, 18,900.

The Commissioner of Patents reports that during the fiscal year ended March 31, 1923, the land vehicle class was still the largest single class of invention, while internal combustion motors was the next largest, though there was a decrease of nearly 20 p.c. in the latter compared with 1922. Inventions pertaining to tillage, grain separation and animal husbandry showed increases of nearly 30 p.c. Applications for wireless communication showed a slight increase and inventions for telephony and telegraphy were the same as in 1922. The coal shortage in the winter of 1922-23 provided a stimulus to inventions connected with the use of fuel oil furnaces. Inventions in typewriters increased considerably; many of the applications were directed to the elimination of noise and to folding portable typewriters.

51.—Statistics of Patents applied for, granted, etc., fiscal years, 1919-1923.

Classification.		Fiscal Year ended March 31.				
		1919.	1920.	1921.	1922.	1923.
Applications for patents	No.	9,025	11,198	13,446	12,274	10,806
Patents granted	"	6,052	9,527	11,152	7,393	12,542
Certificates for renewal fees	"	2,022	2,036	2,549	2,620	2,127
Caveats granted	"	349	408	410	420	452
Assignments	"	3,690	4,479	5,525	5,481	5,143
Fees received, net	$	339,345	294,046	344,712	380,207	413,238

Copyrights.—The first Canadian Copyright Act was passed by the Legislature of Lower Canada on Feb. 25, 1832 (2 William IV, c. 53). This Act was repealed and replaced by an Act of the Province of Canada relating to copyright passed in 1841 (4-5 Vict., c. 61), allowing copyright to any resident of the Province on depositing with the Provincial Registrar a copy of the work and printing in the work a notice of the entry. In 1842 an Imperial Act (5-6 Vict., c. 45), gave to a work first published in the United Kingdom protection throughout the Empire. As at that time the United States had no agreement with the United Kingdom as to copyrights, United States publishers reprinted in cheap editions books copyrighted in the United Kingdom, and many such books naturally found their way into Canada. By the Foreign Reprints Act of 1847 (10-11 Vict., c. 95), the Imperial Government made it possible for Canadians to secure these cheap editions on making provisions safeguarding the rights of the British authors. This was done by Canada in 1850 by an " Act to impose a Duty on Foreign Reprints of British Copyright Works " (13-14 Vict., c. 6), and the duty so imposed was continued by the first Dominion Act of 1868 (31 Vict., chaps. 54 and 56), the latter Act authorizing the Governor in Council to impose a duty not exceeding 20 p.c. *ad valorem* on such reprints and to distribute the proceeds among the owners of the copyrights.

By the B.N.A. Act, exclusive legislative authority in matters of copyright was assigned to the Dominion Parliament. In 1875 an Act was passed (38 Vict., c. 88), allowing a copyright for 28 years to persons domiciled in Canada or in any British Possession, or who, being citizens of any country having an international copyright agreement with the United Kingdom, had registered their claim and complied with the usual conditions.

In 1886 an International Copyright Act (49-50 Vict., c. 33), was passed by the Imperial Parliament, giving to Queen Victoria the right to accede to the Berne Convention. As Canada thus became a member of the Berne Convention with the privilege of withdrawal, books published in Canada by Canadians secured the same privileges as books published first in the United Kingdom, an author of any country subscribing to the Convention obtaining in any other country in the union the same rights as an author of that country. An Imperial Act of 1911 set forth general copyright regulations for the Empire.

The Copyright Act of 1921 (as amended by the Act of 1923), which became effective on Jan. 1, 1924, sets down in section 4 the qualifications for a copyright and in section 5, its duration. " Copyright shall subsist in Canada . . . . . in every original literary, dramatic, musical and artistic work, if the author was at the date of the making of the work a British subject, a citizen or subject of a foreign country which has adhered to the (Berne) Convention and the Additional Protocol . . . or a resident within His Majesty's

Dominions. The term for which the copyright shall subsist shall, except as otherwise expressly provided by this Act, be the life of the author and a period of fifty years after his death." Section 13 provides that if at any time the owner of the copyright fails to print the book in Canada and satisfy the reasonable Canadian demand therefor, anyone may apply for a license to the Minister administering the Act, who may, if the owner fails to print an edition, grant a license to the applicant on the latter paying a royalty to the owner.

Copyright protection is extended to records, perforated rolls, cinematographic films or other contrivances by means of which a work may be mechanically performed. The intention of the Act is to enable Canadian authors to obtain full copyright protection throughout all parts of His Majesty's Dominions, foreign countries of the Copyright Union and the United States of America, as well as in Canada.

This Act, as amended by c. 10 of 1923, restricting the "licensing sections" to citizens of Canada and subjects or citizens of countries which do not belong to the International Copyright Union, came into force on January 1, 1924, and repealed all Imperial Copyright Acts as far as operative in Canada and all existing Canadian Copyright statutes.

52.—Statistics of Copyrights, Trade Marks, Etc., fiscal years, 1919-1923.

Classification.	Fiscal Year ended March 31.				
	1919.	1920.	1921.	1922.	1923.
Copyrights registered.....No.	1,436	2,028	1,729	1,465	1,591
Certificates of copyright..... "	142	201	174	244	217
Trade marks registered..... "	919	1,735	2,128	2,609	2,521
Industrial designs registered..... "	169	186	316	384	330
Timber marks registered..... "	90	22	58	20	17
Assignments registered..... "	255	320	624	570	413
Fee received, net..... $	40,179	60,451	63,175	74,679	71,241

IX.—TRANSPORTATION AND COMMUNICATIONS.

Canada is a country of magnificent distances, nearly 4,000 miles in length from east to west, with its relatively small population of 8,788,483[1] in the main thinly distributed along the southern borders of its vast area. Different parts of the country are shut off from each other by areas which are almost wildernesses, such as the region lying between New Brunswick and Quebec, and the vast areas north of lakes Huron and Superior, the latter dividing the chief industrial region of Ontario and Quebec from the great agricultural areas of the prairies. To such a country with such a population, producing, like our western agriculturalists, mainly for export, or, like our manufacturers, largely for consumption in distant portions of the country itself, cheap transportation is a necessity of life. Before 1850, when the water routes were the chief avenues of transportation and these were closed by ice for several months, the business of the central portions of the country was during the winter in a state of stagnation or hibernation. The steam railway was therefore required for the adequate economic development of Canada, more particularly for linking up with the economic and industrial world the vast productive areas of the Canadian west, and thus promoting their development The construction of the Canadian Pacific railway gave to Canada, as an economic unit, length, but it was "length without breadth." The building of the newer transcontinental railways has for the first time given the country breadth—a fact which in another ten years, as settlement fills the extensive areas thus opened up, will be more evident than it is to-day.

Railway transportation, though in many parts of the country essential, is nevertheless expensive particularly in these last few years, and for bulky and weighty commodities. Hence new enterprises have either been undertaken or are under consideration for improving water communication, such as the new and deeper Welland canal, the deepening of the St. Lawrence canals and of the channel between Montreal and Quebec, and the utilization of the Hudson bay route for the transportation of western grain to the British and continental European markets.

Problems of transportation are, therefore, of vital importance in the economic life of Canada, occupying a large part of the time and thought of our Parliaments and public men. Scarcely less important, from the social and from the economic point of view, is the development of methods of communication, in a country so vast and so thinly peopled. The post office has been a great, though little recognized factor, in promoting solidarity among the people of different parts of the Dominion, while telegraphs and telephones have gone far to annihilate distance, the rural telephone, in particular, having been of great social and economic benefit in country districts. That the use of the automobile has also been of great benefit in promoting social intercourse among the dwellers in rural districts is evidenced by the fact that in Ontario alone, 70,453 passenger cars were owned by farmers in 1922. The press, again, assisted by cheap telegraph and cable rates, and reaching through the mails all over the country, has been of great use in developing national sentiment. To sum up, it may be said that the progress of modern inventions, not least among which is the radiophone, is going far to eliminate that isolation and loneliness which in the past were such characteristic features of Canadian rural life, and have thrown their gloomy shadow across the pages of Canadian literature.

[1] Census of 1921.

In the introductory section is included a statement of the tendencies toward monopoly which have made it necessary to establish a measure of Government control over those transportation and communication agencies which are not Government-owned and operated; to this is added an account of the origin and functions of the Board of Railway Commissioners. The subsequent sub-sections deal in order with steam railways, electric railways, express companies, roads, motor vehicles, air navigation, canals, shipping, telegraphs, telephones and the post office.

I.—GOVERNMENT CONTROL OVER AGENCIES OF TRANSPORTATION AND COMMUNICATION.

Private enterprises engaged in the transportation and communication business have in the past fifty years shown in Canada the same tendency toward consolidation and amalgamation which has been evident elsewhere throughout the civilized world. The basic reason for such consolidation and amalgamation has been the fact that the business of transportation and communication is, generally speaking, a "natural monopoly," *i.e.*, a type of enterprise in which service can be more efficiently and economically rendered to the public where one or a few concerns control a particular type of service throughout the country. The outstanding example of these consolidations in Canada is the concentration of the control of the railways of the country in the hands of the Canadian Pacific Railway and the Canadian National Railways Companies.

However, since such control brings with it an element of monopoly and possible overcharge which is distasteful to the public, it has in Canada, as in other countries, been deemed advisable to set up controlling authorities over the rates to be charged and the other conditions on which services to the public are to be rendered by common carriers. This control, so far as railways within the sphere of action of the Dominion Government are concerned, has been placed in the hands of the Board of Railway Commissioners, whose authority has been in recent years extended to cover various other means of transportation and communication. A brief summary of the history and the functions of this body follows.

Besides the Board of Railway Commissioners, dealing with the larger public utilities coming under the jurisdiction of the Dominion Government, there also exist in several of the provinces bodies which undertake among their duties the supervision and control of local public utilities operating under the jurisdiction of the provinces and the regulation of their rates of service. Among these is the Railway and Municipal Board of Ontario, established in 1906, which controls the construction, operation and maintenance of railways and the approving of their rates and their rules and regulations affecting the public. Similarly in Quebec, a Commission of Public Utilities was established in 1909, and was given superintendence over all Quebec corporations other than municipalities "that own, operate manage or control any system, works, plant or equipment for the conveyance of telegraph or telephone messages or for the conveyance of travellers or goods over a railway, street railway or tramway, or for the production, transmission, delivery or furnishing of heat, light or power, either directly or indirectly to or for the public." In Nova Scotia there is also a Board of Commissioners of Public Utilities, and in Manitoba there is a Public Utilities Commission, with similar functions, while in British Columbia these same functions are performed by the provincial Department of Railways.

The Board of Railway Commissioners for Canada.

In the early days of railway building in Canada, the provinces were more concerned with rapid development than with rate regulation. Under the Railway Clauses Consolidation Act of 1851, rates were fixed by the directors of the railway, subject to the approval of the Governor in Council. Beyond this, competition was relied upon to bring rates to a reasonable level. As time went on, however, those who believed in the efficacy of competition as a regulator were disillusioned. For example, complaints were made that the Grand Trunk gave low through transit rates, say from Chicago to New York, through Canada, and recouped itself by high non-competitive rates in Upper Canada. In 1888 the supervision of rates was given to the Railway Committee of the Privy Council, sitting in Ottawa.

At the turn of the century, two reports were prepared for the Department of Railways and Canals by Professor S. J. McLean, the first setting down the experience of railway commissions in England and the United States, and the second discussing Canadian rate grievances, with a recommendation that regulation by commission be adopted in Canada. The second report found that non-competitive rates were exorbitant as compared with competitive ones and that the railways had exercised their right to vary rates without notice, to the great distress of shippers. Among the weaknesses of the Railway Committee as a rate regulating body was its fixed station at Ottawa, which made the cost of appearing before it practically prohibitive. Besides, members of Parliament had no necessary aptitude for dealing with railway rates, and of their two functions—political and administrative—the political was to them the more important.

The Board of Railway Commissioners for Canada, as provided for by the amended Railway Act of 1903, was organized on February 1, 1904. In the beginning, its membership consisted of a Chief Commissioner, a Deputy Chief and one Commissioner. In 1908 the membership was increased by the inclusion of an Assistant Chief Commissioner and two other Commissioners. According to the Act, the Board may be divided into two sections of three, but since any two members constitute a quorum, two commissioners usually hear all but the more important cases, and, agreeing, give the decision of the Board.

The powers of the Commission, in brief, are in matters relating to the location, construction and operation of railways. The most important of these powers has to do with rate regulation. Passenger rates are divided into standard and special, freight rates into standard, special and competitive. Standard rates are maximum rates and the only ones which must be approved by the Board before they are applied. Special and competitive rates, being less than maximum rates, may be applied by railways without the Board's approval, provided that a change of rates has been advertised. But important rate adjustments usually come to the notice of the Commission, for the changed rate alters the extent of the territory in which a shipper can compete and on this account he is apt to appeal the case to the Commission. It is a knotty question to mark the boundaries of competitive areas—to decide whether Nova Scotian manufacturers should be given rates which will allow them to compete west of Montreal, or again, whether high construction and operation costs in British Columbia should enforce a rate which prevents her goods from moving far into the prairies. By an amendment to the Railway Act, the regulation of telephone, telegraph and express rates was given to the Commission, but with narrower powers than were given to it in dealing with railways.

The procedure of the Board is informal, as suits the nature of its work, for experience has shown that hearings in strict legal form give the parties to the argument uncompromising attitudes. If possible, matters are settled by recommendations to the railway company or the shipper; thus, during 1921, 88 p.c. of the applications to the Board were settled without formal hearing. The Railway Committee had kept its station at Ottawa, giving only formal hearings, so that the grievances of those who could not afford to appear in person or pay a counsel went unredressed. The itineraries of the Railway Commission are arranged so that evidence may be taken at the least expense to those giving it.

The Chief or Assistant Chief Commissioner, depending upon which one is presiding, gives final judgment on points of law when, in the opinion of the Commissioners, the question is one of law. On questions of fact the findings of the Board are final and are not qualified by previous judgments of any other court. Questions of law and jurisdiction are differentiated. In the first case, the Board may, if it wishes, allow an appeal to the Supreme Court; in the second, the applicant needs no permission to present his appeal.

The Railway Committee of the Privy Council, being a committee of the Cabinet, was responsible to Parliament. When the powers of the Committee were made over to the Railway Commission the responsibility was retained, but necessarily by a different means. There is now provision for an appeal from any decision to the Governor in Council, who may also of his own motion interfere to rescind or vary the action of the Board, but the power to rescind or vary usually consists in referring a matter to the Board for reconsideration. From its inception until Dec. 31, 1922, the Board gave formal hearing to 7,518 cases. Its decision was appealed in 80 cases, 46 of these being to the Supreme Court of Canada and 34 to the Governor-General in Council. Of the appeals (with 2 still pending), 10 of those carried to the Supreme Court were allowed and one of those to the Governor-General in Council.

II.—STEAM RAILWAYS.

1.—Historical Sketch.

The first Canadian railway was constructed in the year 1836, between St. Johns, Quebec, and La Prairie, with the object of shortening the journey between Montreal and New York. It was only 16 miles long and was operated by horses, for which locomotives were substituted in 1837. A second railway from Montreal to Lachine was opened in 1847, and a third line to St. Hyacinthe in 1848. In 1850, however, there were only 66 miles of railway in all Canada.

Commencement of the Railway Era—The Grand Trunk.—The railway era in Canada may be said to have begun in 1851, when an Act was passed, providing for the construction of a main line of railway between the two Canadas. The result was the completion of the Grand Trunk railway between Montreal and Toronto in 1856, its extension westward to Sarnia in 1859, and eastward to Rivière du Loup in 1860. The Atlantic and St. Lawrence railway from Portland, Maine, to the Canadian boundary, was leased for 999 years, and in 1859, on the completion of the Victoria bridge across the St. Lawrence at Montreal, the Grand Trunk had a through route 800 miles long from Portland to Sarnia. A line from Detroit to Port Huron was leased in 1859, the Champlain roads in 1863, the Buffalo and Lake Huron in 1867, while the Chicago and Grand Trunk was completed from Port Huron to Chicago in 1880. In 1881 the Georgian Bay and Lake Erie system,

with 171 miles, was incorporated, and in the following year the amalgamation with the Great Western (904 miles) took place, while the Midland system (473 miles) was also incorporated into the Grand Trunk. In 1888 the Northern railway, which had been opened from Toronto to Barrie in 1853, and the Hamilton and North-western railway, were taken over by the Grand Trunk. In 1891 the completion of the St. Clair tunnel gave direct communication with the railways of the United States. In the seventies the gauge had been changed from the original 5′ 6″ to the standard gauge of 4′ 8½″.

Construction of the Intercolonial.—The Intercolonial railway between the Maritime Provinces and Canada had been proposed as early as the thirties. In 1844 the Imperial Government made a survey for a military road, and in 1851 agreed to recommend to Parliament either a guarantee of interest or an advance of the sum required to build a railroad. Differences of opinion as to the route resulted in the project falling through, but in 1853 Nova Scotia undertook to construct by 1862 a trunk line from Halifax to the New Brunswick frontier, with branch lines to Pictou and Victoria Beach. In both Nova Scotia and New Brunswick, however, the scheme of an Intercolonial railway broke down for lack of funds, and in 1867 there were only 341 miles of railway in the Maritimes—196 miles in New Brunswick, including lines from St. John to Shediac and from St. Andrews to Richmond; 145 miles in Nova Scotia, including lines from Halifax to Truro and Windsor, and from Truro to Pictou. These, under the B.N.A. Act, passed to the Dominion Government. The latter on its part undertook the completion of the railway, and in 1876 the line was opened. In 1879 the Rivière du Loup branch of the Grand Trunk was acquired, and in 1898 the Drummond Counties Railway from Chaudière Junction to Ste. Rosalie Junction was leased, and running rights obtained from the latter point over the Grand Trunk tracks into Montreal, the Intercolonial thus becoming a competitor for the business of the commercial metropolis of Canada.

The first Transcontinental Railway—the C.P.R.—As early as 1849 a pamphlet published by Major Carmichael-Smyth advocated the construction of a Canadian Pacific railway nearly along the present route. In 1851 a Parliamentary Committee reported against the undertaking of the enterprise at that time. In 1871 the terms under which British Columbia entered Confederation pledged the Dominion to commence the Pacific railway within two years, and complete it within ten years. The work of construction of the railway as a public work actually commenced in 1874, but was not very rapidly pushed forward. In 1880 the Government entered into a contract with the Canadian Pacific Railway syndicate, granting to the syndicate all portions of the line completed or under construction, a cash subsidy of $25,000,000 and a land grant of 25,000,000 acres, free admission of materials for construction, and protection for 20 years against competing lines. The company on its side agreed to complete the railway to a fixed standard by May 1. 1891, and thereafter to maintain it efficiently. As a matter of fact the last spike on the main line was driven on Nov. 7, 1885. Like the Grand Trunk, the Canadian Pacific railway now began to acquire small branch lines as feeders; among them being the North Shore, Quebec, Montreal, Ottawa and Ontario in 1881, the Winnipeg to Manitou line in 1882, the Ontario and Quebec, the Credit Valley and the Toronto, Grey and Bruce in 1883, the St. Lawrence and Ottawa and Manitoba Southwestern, in 1884, the North Shore, Nova Scotia, in 1885, the Atlantic and Northwest, in 1886, the West Ontario Pacific, in 1887, the Sudbury and Sault Ste. Marie, in 1888, the New Brunswick railway, the Columbia and Kootenay in 1890, the Montreal and Ottawa and Montreal and Lake Maskinonge in 1892.

The second Transcontinental—the Canadian Northern railway.—The second transcontinental railway, the Canadian Northern, was begun in 1896 with the completion by Mackenzie and Mann of the 125 mile line of the Lake Manitoba Railway and Canal Company, chartered in 1889. Next were acquired the charters of the Winnipeg and Hudson Bay, the Manitoba and Southeastern, the Ontario and Rainy River, and the Port Arthur, Duluth and Western. Assisted by the Manitoba Government, which desired to establish competition with the Canadian Pacific railway, the Canadian Northern next secured the Manitoba lines of the Northern Pacific, and in 1902 completed its line from Winnipeg to Port Arthur. By securing guarantees of bonds from the Dominion and Provincial Governments it was enabled to complete the great scheme of a transcontinental road, opening up in Ontario and in the West large undeveloped areas which are now in process of settlement.

The third Transcontinental—the Grand Trunk Pacific.—Before the continental ambitions of the Canadian Northern were generally understood, the question came up of building an additional transcontinental line. About the end of the century, the Grand Trunk began to look with envy at the large and increasing revenues drawn by the Canadian Pacific railway from the great Northwest. In 1902, the Grand Trunk submitted to the Dominion Government a proposition to construct a line from North Bay to the Pacific coast, provided that a grant of $6,400 and 5,000 acres of land per mile should be made. The Government, in 1903, submitted a counter-proposition that the line, instead of terminating at North Bay, should be continued east to Moncton, New Brunswick, the easterly section from Moncton to Winnipeg to be constructed by the Government and leased to the Grand Trunk for a fifty-year period, the railway paying no rent for the first seven years and 3 p.c. on the cost of the railway for the remaining 43 years. The western half of the railway from Winnipeg to Prince Rupert was to be built by the Grand Trunk, the Government guaranteeing interest on bonds to 75 p.c. of the cost of construction, not exceeding $13,000 per mile on the prairie section and $30,000 per mile on the mountain section. This proposition was accepted and construction commenced on the National Transcontinental and the Grand Trunk Pacific.

Effect of the War on the Railways. The Drayton-Acworth Report.—With two new transcontinental main lines besides branches under construction, Canadian railway mileage was doubled between 1900 and 1915, increasing from 17,657 miles in the former year to 35,582 miles in the latter. The builders of the new lines, as well as the Canadian Government and people, had expected that immigration of capital and labour from Europe would rapidly settle the areas tributary to the new railroads and give them abundant and lucrative traffic, as had been the case with the C.P.R. Instead the war came, and European labour and capital were conscripted for the struggle; immigration fell off, while cost of operation increased, owing to the scarcity of labour and material in Canada. The interest on the bonds had to be met, and in 1915 the Government felt it necessary to give assistance to the railways. In 1916, after having again made a loan to the Grand Trunk Pacific railway and the Canadian Northern Railway Company, a Royal Commission was appointed by Order in Council of July 13, 1916, to investigate: (1) the general problem of transportation, (2) the status of each of the three transcontinental systems, (3) the reorganization of any of the said systems, or their acquisition by the State, and (4) others matters considered by the Commission to be relevant to the general scope of the inquiry. Alfred Holland Smith of New York, Sir Henry Drayton of Ottawa and Sir George Paish of London, England

were originally appointed to the Commission. On the resignation of the latter William M. Acworth was appointed to take his place. The majority report of the Commission, which was signed by Sir Henry Drayton and Mr. Acworth, has formed the basis of the subsequent railway policy of Canada. Their recommendation was that the public should take control of the Canadian Northern, of the Grand Trunk Pacific and of the Grand Trunk proper; and that they should be administered on purely business principles by a Board of Trustees, such compensation as seemed proper to be decided by arbitration and given to the shareholders of the Canadian Northern and the Grand Trunk.

Origin and Growth of Government-owned Railways.

Canadian Government Railways.—The Intercolonial railway, built as a condition of Confederation and completed in 1876, and the Prince Edward Island railway, opened in April, 1875, have since their construction been owned and operated by the Dominion Government. In 1903 the Dominion Government undertook the construction of the eastern division of the National Transcontinental railway from Moncton, N.B., to Winnipeg, to be leased to the Grand Trunk Pacific Railway Company for a period of 50 years. On the failure of the latter company to take over the operation of the road when completed in 1915, the Government itself undertook its operation—capital expenditure up to Dec. 31, 1922, $169,090,122. Thus on March 31, 1918, the Canadian Government railways had a total mileage of 5,150·08, comprising the Intercolonial railway, 2,305·23 miles; St. John and Quebec railway, leased under authority of Chapter 49 of the Statutes of 1912, 127·72 miles; Prince Edward Island railway, 313·82 miles; and National Transcontinental railway, 2,403·31 miles. Under Orders in Council of May 22, 1918, and August 30, 1918, the Moncton and Buctouche, the Elgin and Havelock, St. Martin's railway, the York and Carleton railway and the Salisbury and Albert railway were taken over. Also, under Order in Council of December 1, 1919, the Lotbinière and Megantic railway; under Order in Council of June 10, 1920, the Caraquet and Gulf Shore railway and under Order in Council of June 12, 1920, the Cape Breton railway, were incorporated in the Government railway system. The Hudson Bay railway, with 332·5 miles of steel rail at the end of 1920, and 214 miles operated, out of its total length of 424 miles, has been declared to be comprised in the Canadian Government railways, and is being operated to a limited extent by the board of directors of the Canadian National Railways. Its cost to Dec. 31, 1922, was $20,569,266, of which $14,354,162 was chargeable to the railway and $6,215,104 to the terminals at Port Nelson. During the calendar year 1922 its gross earnings were $32,626, its working expenses $57,577—a deficiency of $24,951.

Canadian Northern Railway.—In pursuance of an Act passed in 1917 (7-8 George V, c. 24), intituled an Act providing for the acquisition by His Majesty of the capital stock of the Canadian Northern Railway Company, and an agreement entered into under the Act, the Government acquired the entire capital stock of the Canadian Northern Railway Company, except five shares issued in exchange for Canadian Northern Railway income charge convertible debenture stock. Having thus acquired control, the Government, in September, 1918, appointed a new board of directors of the Canadian Northern Railway Company. This board, under Order in Council of November 20, 1918, became also a board of management of the Canadian Government railways, with all the powers theretofore vested in the general manager of the Canadian Government railways. The use of the general term "Canadian National Railways" to describe both systems was authorized

by Order in Council of December 20, 1918, the corporate entity of each system being, however, preserved. The Canadian Northern system, at the time of its acquisition by the Government, had a total mileage of 9,566·5 miles.

The Grand Trunk Pacific.—During 1916, 1917 and 1918, the Grand Trunk Pacific received advances from the Government, totalling $19,639,837, to enable it to "carry on" during difficult times. Towards the close of the fiscal year 1918-19, approximately $950,000 of the $7,500,000 authorized in the estimates of that year remained unexpended. The company desired to use this to pay interest on Grand Trunk Pacific Debenture Stock, but the Government insisted that deficits in operation should have priority over all other charges, and made the remittance conditional upon that understanding. As a result, the company notified the Government that it would be unable to meet the interest due on its securities on March 1, 1919. This was followed on March 4, by a notification from the company that it would be unable to continue operation of the railway after March 10. As it was necessary, in the interests of the immense territories served by the railway, to maintain the operation of the railroad, the Minister of Railways was appointed receiver from midnight of March 9, and for a time the road was operated apart from the Canadian National Railways. In October, 1920, the management was transferred to the Canadian National Railways, and 1921 was the first complete year of the operation of this road as an integral part of the Canadian National system.

The Grand Trunk.—The desire of the parent organization, the Grand Trunk, to be relieved of its obligations in respect of the Grand Trunk Pacific, and Grand Trunk financial difficulties, led to negotiations early in 1918 for the taking over and inclusion of the Grand Trunk in the Government system of railways. These continued until October, 1919, and resulted in Chapter 13 of the 2nd Session of that year, an Act to acquire the Grand Trunk Railway system. This legislation provided for the sale and purchase of the preference and common stock, the value of which was to be determined by arbitration. On certain other stocks, namely, the 4 p.c. guaranteed stock and the debenture stocks, the Government agreed to guarantee the payment of dividends and interest, provided the voting powers exercised by the shareholders should cease on the provision of the guarantees. The guarantees were to take effect on the appointment of a committee of management representative of both the company and the Government. The committee of management, which consisted of C. A. Hayes and S. J. Hungerford, representing the Canadian National Railways, W. D. Robb and Frank Scott, representing the Grand Trunk, with President Howard G. Kelley, of the Grand Trunk, as chairman, held its first meeting on May 31, 1920, from which date the Government assumed its liability under the Act already referred to. The arbitrators appointed were Sir Walter Cassels, Chairman; Sir Thomas White, for the Government; and Hon. W. H. Taft, for the Grand Trunk. The arbitration proceedings commenced on February 1, 1921. The agreement under the Grand Trunk Acquisition Act limited the time for the completion of the arbitration proceedings to nine months from the date of the appointment of the arbitrators. The arbitrators had been appointed on July 9, 1920, and the arbitration proceedings had not been completed when the proceedings lapsed on April 9, 1921.

This difficulty led to further delay, and to reinstate the arbitration proceedings necessitated more legislation. With this in view, an Act respecting the Grand Trunk arbitration was put through and became law on May 3, 1921. This legislation provided for the reviving of the arbitration proceedings, conditional upon

the resignation of the Grand Trunk English directorate, the substitution of a Canadian Board, and the establishment of the head office in Canada. The English directors resigned on May 26, and the Canadian Board was appointed, as follows:—Sir Joseph Flavelle, Bart., Toronto; Howard G. Kelley, Montreal; A. J. Mitchell, Toronto; E. L. Newcombe, K.C., Ottawa; and J. N. Dupuis, Montreal. The arbitration proceedings were revived on June 1, and the hearing finally concluded on July 8. The award was made on Sept. 7, the chairman, Sir Walter Cassels, and Sir Thomas White holding that the preference and common stocks of the Grand Trunk Company had no value in view of the financial condition of the Grand Trunk, consequent upon its Grand Trunk Pacific entanglements. Hon. W. H. Taft dissented from this finding, holding that the securities in question should be valued at not less than $48,000,000, his contention being that the preference and common stocks would be earning dividends in five year's time. The acquisition agreement provided for an appeal on a point of law, and as the majority of the arbitrators had declined to hear evidence as to replacement value of the physical property of the system, an appeal was made to the Judicial Committee of the Privy Council. This appeal was dismissed on July 28, 1922.

Consolidation and Reorganization of the Canadian National System.—The Grand Trunk arbitration finally disposed of, steps were taken for the consolidation of the various railways under Government operation and control. By Order in Council dated August 14, 1922, the resignation of Howard G. Kelley, as Director and President of the Grand Trunk Railway Company of Canada, was accepted and Graham A. Bell appointed to the vacancy on the Board of Directors, while W. D. Robb, ranking Vice-President, was appointed Vice-President and General Manager pending reorganization. On October 4, 1922, the resignations of the Grand Trunk Board were formally accepted, and on the same date a new Board was appointed by Order in Council, to act as Directors both of the Canadian National and the Grand Trunk Railways. On October 10, the new Board met in Toronto, when the members were formally elected to the Canadian National directorate, replacing the Canadian Northern Board, whose resignations had been tendered and accepted by the Minister of Railways.

On January 19, 1923, the whole of the preference and common stock of the Grand Trunk Railway Company was, by Order in Council, vested in the Minister of Finance in trust for His Majesty.

On January 20, 1923, an Order in Council was passed handing over to the new Canadian National Railway Board the management and operation of the Canadian Government railways, designated specifically as : The Intercolonial railway, The National Transcontinental railway, The Lake Superior branch, leased from the Grand Trunk Pacific Railway Company, The Prince Edward Island railway, The Hudson Bay railway, and all other railways and branch lines vested in His Majesty, and comprising what has been known as the Canadian Government railways. This Order in Council superseded and cancelled the Order in Council of November 20, 1918, which had appointed the Canadian Northern Board to operate and manage these railways.

The unification of the Grand Trunk and Canadian National Railways was provided for by Order in Council of January 30, 1923, which also brought into effect the Act to incorporate the Canadian National Railway Company and respecting Canadian National Railways (Chap 13, 1919). This was followed on February 5, 1923, by an Order in Council establishing the head office of the Canadian National railways at Montreal, Que.

After due consideration the new management divided the combined and reorganized National railway system into three regions for operating purposes:—

Atlantic Region: All lines in the Maritime Provinces and as far west as, and including, Rivière du Loup, on the Intercolonial, and as far as, but not including, Monk on the Transcontinental; headquarters, Moncton.

Central Region: All lines from Rivière du Loup and Monk, Que., to Current Junction, on the Canadian Northern, 2 miles east of Port Arthur, and to Superior Junction, on the National Transcontinental, and including the Portland line and the lines west of the Detroit River; headquarters, Toronto.

Western Region: All lines from Current Junction and Superior Junction, Ont., to the Pacific Coast, including Vancouver Island; headquarters, Winnipeg.

The Central Vermont, for the present, is being operated as a separate entity, with headquarters at St. Albans, Vt.

As to reorganization, Sir Henry Thornton, Chairman of the Board and President of the Canadian National railways, stated, in a communication which the Minister of Railways made to Parliament on March 27, 1923, that, when the new management took charge, about December 1, 1922, there had been three primary problems which demanded immediate attention: 1. The determination of the kind of an organization which was to be employed in the administration of the property; 2. The determination of the regions into which the property was to be divided for operating purposes and the location of regional and general headquarters; 3. The selection of officers for the various posts involved in the organization.

The organization which had been decided upon was what might be called a strengthened divisional organization as distinguished from a departmental organization. The executive officers consist of a chairman and president, assisted by five vice-presidents, as follows:—

1. Vice-President in charge of operation, maintenance and construction.
2. Vice-President in charge of financial affairs.
3. Vice-President in charge of insurance, immigration, development, lands, express and telegraphs.
4. Vice-President in charge of legal affairs.
5. Vice-President in charge of traffic.

The above executive officers represent the minimum with which, in Sir Henry Thornton's judgment, it would be possible to operate such a property as the Canadian National railways; indeed, as time goes on and traffic increases, it would, he stated, probably be necessary to add another vice-president.

In dividing the railway into three regions for operating purposes, the principle followed had been to give to each operating region as much autonomy and local control in the actual operation of the property as was consistent with efficient principles of administration. Every effort would be made to confine the functions of the vice-presidents and the executive officers to policies, leaving to general managers, general superintendents and superintendents the responsibility of carrying out details. He felt that in the administration of such a large property as is represented by the Canadian National railways no other theory of organization could be successful, and, in conclusion, the new President made the following suggestion:—

"In the organization of such a property, where we employ about one hundred thousand people, scattered over nearly 23,000 miles of line, the process of consolidating and harmonizing the various forces is one which will necessarily take some time. It is, therefore, earnestly hoped that those who administer the affairs of the nation will be sufficiently patient to give those who are sincerely, honestly

and conscientiously working out this problem an opportunity to show what can be accomplished before criticisms are made."

Quebec Bridge.—The Quebec Bridge was built by the Dominion Government to replace the structure which fell during the erection in 1907. The contract for the substructure was let in 1909, and for the superstructure in 1911. The bridge was opened for traffic in October, 1917, although not entirely completed until August, 1918. It was officially opened by H.R.H. the Prince of Wales, on August 22, 1919. The main span is the longest in the world, being 1,800 feet centre to centre of piers, or 100 feet longer than that of the Forth Bridge in Scotland. The total expenditure on this structure to March 31, 1923, was $22,640,228. The bridge is of the cantilever type and carries a double track railway and accommodation for foot traffic, but no highway. The bridge forms a connecting link in the Canadian National Railway system, and is operated as a part of such systems.

Statistics of the operation of the Canadian National Railways for the years 1920, 1921 and 1922 are given in Table **20**, page 636.

2.—Statistics of Steam Railways.

Statistical tables illustrating the construction and operation of steam railways in Canada up to and including the year 1922 are appended.

1.—Record of Steam Railway Mileage, June 30, 1835-1919, and Dec. 31, 1919-1922.

Years.	Number of miles in operation.	Years.	Number of miles in operation.	Years.	Number of miles in operation.	Years.	Number of miles in operation.
1835	-	1857	1,444	1879	6,858	1901	18,140
1836	16	1858	1,863	1880	7,194	1902	18,714
1837	16	1859	1,994	1881	7,331	1903	18,988
1838	16	1860	2,065	1882	8,697	1904	19,431
1839	16	1861	2,146	1883	9,577	1905	20,487
1840	16	1862	2,189	1884	10,273	1906	21,353
1841	16	1863	2,189	1885	10,773	1907	22,452
1842	16	1864	2,189	1886	11,793	1908	22,966
1843	16	1865	2,240	1887	12,184	1909	24,104
1844	16	1866	2,278	1888	12,163	1910	24,731
1845	16	1867	2,278	1889	12,628	1911	25,400
1846	16	1868	2,270	1890	13,151	1912	26,727
1847	54	1869	2,524	1891	13,838	1913	29,304
1848	54	1870	2,617	1892	14,564	1914	30,795
1849	54	1871	2,695	1893	15,005	1915	35,582
1850	66	1872	2,899	1894	15,627	1916	37,434
1851	159	1873	3,832	1895	15,977	1917	38,604
1852	205	1874	4,331	1896	16,270	1918	38,879
1853	506	1875	4,084	1897	16,550	1919	38,896
1854	764	1876	5,218	1898	16,870	1919	39,058
1855	877	1877	5,782	1899	17,250	1920	39,384
1856	1,414	1878	6,226	1900	17,657	1921	39,771
						1922	39,773

During the year 1922, 495 miles of new line were opened for operations; 267 miles were completed but not opened for traffic, and 1,115 miles were under construction. These are not net figures, however, as there was considerable mileage shortened and lifted where conditions warranted the change.

2.—Steam Railway Mileage by Provinces, June 30, 1916-1919 and Dec. 31, 1919-1922.

Provinces.	June 30.				Dec. 31.			
	1916.	1917.	1918.	1919.	1919.	1920.	1921.	1922.
Prince Edward Island	275	278	279	279	276	279	279	278
Nova Scotia	1,436	1,422	1,428	1,432	1,435	1,438	1,452	1,451
New Brunswick	1,957	1,959	1,959	1,948	1,993	1,816	1,948	1,947
Quebec	4,733	4,734	4,791	4,866	4,877	4,941	4,971	4,977
Ontario	11,320	11,049	11,057	11,000	10,988	11,001	10,976	10,881
Manitoba	4,309	4,194	4,168	4,190	4,193	4,403	4,417	4,585
Saskatchewan	5,378	6,124	6,162	6,148	6,141	6,220	6,296	6,267
Alberta	3,894	4,444	4,273	4,285	4,354	4,474	4,557	4,680
British Columbia	3,604	3,885	4,247	4,238	4,287	4,325	4,376	4,374
Yukon	102	102	102	102	100	69	58	58
In United States	426	413	413	414	414	418	441	273
Canada	**37,434**	**38,604**	**38,879**	**38,896**	**39,058**	**39,384**	**39,771**	**39,773**

3.—Capital Liability of Steam Railways, June 30, 1876-1919, and Dec. 31, 1919-1922.

Years.	Stocks.	Funded Debt.	Total.	Years.	Stocks.	Funded Debt.	Total.
	$	$	$		$	$	$
1876	180,955,657	76,079,531	257,035,188	1900	410,326,095	373,716,704	784,042,799
1877	182,578,994	79,676,382	262,255,376	1901	424,414,314	391,696,523	816,110,837
1878	191,331,767	83,710,938	275,042,705	1902	460,401,863	404,806,847	865,208,710
1879	192,674,553	81,151,628	273,826,181	1903	483,770,312	424,100,762	907,871,074
1880	189,956,177	80,661,316	270,617,463	1904	492,752,530	449,114,035	941,866,565
1881	199,527,981	84,891,313	284,419,294	1905	526,353,951	465,543,967	991,897,918
1882	214,468,465	92,487,932	306,956,397	1906	561,655,395	504,226,234	1,065,881,629
1883	269,092,615	102,134,295	371,226,910	1907	588,568,591	583,369,217	1,171,937,808
1884	285,077,822	109,310,963	394,388,785	1908	607,891,349	631,869,664	1,239,761,013
1885	312,182,162	141,370,963	453,553,125	1909	647,534,647	660,946,769	1,308,481,416
1886	317,141,948	169,359,306	486,501,254	1910	687,557,387	722,740,300	1,410,297,687
1887	324,128,738	194,801,553	518,930,291	1911	749,207,687	779,481,514	1,528,689,201
1888	327,493,882	228,617,728	556,111,610	1912	770,459,351	818,478,175	1,588,937,526
1889	332,559,672	251,675,226	584,234,898	1913	918,573,740[1]	613,256,952	1,531,830,692[1]
1890	338,177,386	266,885,707	605,063,093	1914	1,026,418,123[1]	782,402,638	1,808,820,761[1]
1891	339,769,786	292,291,654	632,061,440	1915	1,024,085,983[1]	851,724,905	1,875,810,888[1]
1892	344,400,282	305,120,200	649,520,482	1916	1,024,264,325[1]	868,861,449	1,893,125,774[1]
1893	371,877,287	307,225,888	679,103,175	1917	1,089,114,875[1]	896,005,116	1,985,119,991[1]
1894	361,760,508	327,003,803	688,764,311	1918	1,093,885,495[1]	905,994,999	1,999,880,494[1]
1895	361,449,590	330,785,546	692,235,136	1919	1,100,301,195[1]	914,823,515	2,015,124,710[1]
1896	361,075,340	336,137,601	697,212,941	1919	1,104,409,122[1]	931,756,481	2,036,165,606[1]
1897	367,611,048	348,834,086	716,445,134	1920	1,323,705,962[2]	846,324,166	2,170,030,128[1]
1898	378,151,790	354,946,865	733,098,655	1921	1,372,515,165[1]	792,142,471	2,164,687,636[1]
1899	391,300,360	362,053,495	753,353,855	1922	1,415,623,322[1]	743,653,809	2,159,277,131[1]

[1] Including consolidated debenture stock of the Canadian Pacific Railway, $163,257,224 in 1913, $173,307,470 in 1914, $176,284,882 in 1915 and 1916, $216,284,882 in 1917, 1918, 1919, and $435,294,722 in 1920, $492,095,525 in 1921, and $530,793,106 in 1922 for all companies.

Financial statistics of Canadian railways illustrate numerous difficulties attending their operation during the past three years. The high rates which prevailed during 1920 and part of 1921 offset materially the universally high costs of operation during these years. In 1922, however, with rates from 6 to 25 p.c. lower than during the previous year, reductions in wage bills were essential, and, with decreased cost of materials, have enabled the earning of substantial net revenues. These reductions, combined with increased traffic density, have enabled the railways to keep expenses on the whole below those of 1921 and well below those of 1920, and to show, generally, surpluses from operation.

4.—Mileage, Capital Liability, Earnings and Operating Expenses of Steam Railways for the calendar year 1921.

Name of Railway.	Single Track Mileage.	Capital Liability.	Gross Earnings.	Operating Expenses.
	Miles	$	$	$
Algoma Eastern	89·45	5,722,300	555,056	497,828
Algoma Central and Hudson Bay	346·20	20,406,800	2,019,058	1,971,234
Atlantic, Quebec and Western	104·50	6,598,675	200,499	296,210
Alberta and Great Waterways	113·20	7,450,000	176,515	436,274
British Yukon	90·32	4,978,879	185,845	137,134
Brandon, Saskatchewan and Hudson Bay	69.45	2,150,000	83,710	173,782
Canada and Gulf Terminal	38·10	1,740,000	138,447	111,737
Canada Southern	380·55	37,630,000	20,310,515	14,170,368
Canadian National—				
Canadian Govt. Rys	4,531·42	–	40,964,304	46,551,603
St. John and Quebec	158·11	–	311,011	438,445
Canadian Northern	9,717·33	466,892,195	67,403,439	74,075,272
Canadian Pacific, including leased lines	13,350·40	650,455,298	193,178,868	155,855,419
Central Canada	48·50	3,083,871	58,240	183,691
Central Vermont	137·19	2,161,915	502,352	443,854
Crows Nest Southern	74·18	4,295,000	333,202	356,799
Cumberland Railway and Coal Co	32·00	–	249,765	225,457
Detroit River Tunnel	2·72	21,000,000	–	–
Dominion Atlantic	288·36	8,431,500	2,163,531	1,674,336
Eastern British Columbia	14·00	420,000	29,795	58,617
Edmonton, Dunvegan and British Columbia	407·08	11,797,940	1,115,782	1,908,746
Essex Terminal	21·00	720,000	219,690	187,919
Esquimalt and Nanaimo	199·20	7,332,000	1,367,482	962,256
Fredericton and Grand Lake	31·10	605,000	175,355	113,549
Grand Trunk Pacific (including branch lines)	2,743·09	217,005,420	16,638,678	20,668,370
Grand Trunk	3,589·62	485,837,384	76,858,032	71,179,293
Hereford	53·06	1,600,000	99,748	263,721
International Bridge Co	1·02	2,012,260	–	–
Inverness Railway and Coal Co	60·91	–	–	–
Kent Northern	29·00	76,000	36,886	46,594
Kettle Valley	357·38	15,960,000	1,087,893	1,275,670
Lake Erie and Detroit River	–	4,400,000	–	–
Lake Huron and Northern Ontario	–	1,190,000	–	–
Maine Central	5·10	–	25,789	32,232
Midland Railway of Manitoba	6·40	4,800,000	548,671	554,849
Maritime Coal and Ry. Co	16·40	3,660,100	143,109	104,197
Massawippi Valley	35·46	800,000	290,341	372,046
Montreal and Atlantic	184·40	4,265,000	1,611,221	1,864,077
Morrissey, Fernie and Michel	10·85	1,263,000	133,391	120,145
Manitoba Great Northern	91·92	2,066,000	67,560	143,914
Napierville Junction	28·46	600,000	552,281	490,840
Nelson and Fort Sheppard	54·84	2,846,800	83,714	169,927
New Brunswick Coal and Ry. Co	59·02	[1]	75,143	110,961
New Westminster Southern	3·72	600,000	1,621	2,033
North Shore, N.B.[2]	–	133,000	–	–
Northern New Brunswick and Seaboard	–	595,500	–	–
Ottawa and New York	56·90	2,100,000	362,412	465,513
Père Marquette in Canada	199·04	5,870,000	5,321,034	3,214,835
Pacific Great Eastern	360·80	69,226,403	383,390	751,932
Phillipsburg Ry. and Quarry Co	–	164,500	–	–
Quebec Central	295·53	9,615,009	2,798,840	2,247,346
Quebec Oriental	100·00	2,214,574	324,660	316,105
Quebec Ry., Light and Power Co	28·60	–	158,011	177,914
Quebec, Montreal and Southern	190·78	7,000,000	594,912	974,517
Roberval and Saguenay	37·00	2,630,000	533,405	326,717
Red Mountain	9·47	412,600	4,434	20,554
Rutland and Noyan	3·39	200,000	7,654	7,505
St. Clair Tunnel	2·24	3,200,000	–	–
St. Lawrence and Adirondack	46·14	2,155,567	1,243,898	1,003,544
Sydney and Louisburg	77·49	[3]	2,212,879	2,145,410
Temiscouata	122·18	4,099,669	429,301	363,683
Timiskaming and Northern Ontario[4]	328·50	–	4,359,480	4,041,550
Thousand Islands	6·08	110,000	58,925	51,443
Toronto, Hamilton and Buffalo	99·95	10,017,500	2,677,985	2,185,658
Van Buren Bridge Co	1·07	500,000	–	–
Vancouver, Victoria and Eastern	230·75	23,500,000	893,045	1,045,766
Wabash Ry. Co. in Canada	–	–	5,647,986	5,017,789
Total	**39,771**	**2,164,687,636**	**158,008,891**	**422,581,205**

[1] Owned and operated by New Brunswick Government. [2] Not operating. [3] General capital of Dominion Coal Co. [4] Constructed and operated by Ontario Government Commission.

5.—Mileage, Capital Liability, Earnings and Operating Expenses of Steam Railways for the calendar year 1922.

Name of Railway.	Single Track Mileage.	Capital Liability.	Gross Earnings.	Operating Expenses.
	Miles.	$	$	$
Algoma Eastern	85·41	5,708,900	526,092	410,221
Algoma Central and Hudson Bay	346·20	20,398,800	1,668,706	1,656,468
Atlantic, Quebec and Western	104·50	6,598,675	242,402	243,593
Alberta and Great Waterways	113·20	7,450,000	142,632	187,259
British Yukon	90·32	4,978,879	197,950	121,968
Brandon, Saskatchewan and Hudson Bay	69·45	2,150,000	78,251	159,926
Canada and Gulf Terminal	38·10	1,740,000	132,596	85,106
Canada Southern	380·55	37,630,000	21,465,990	14,298,472
Canadian National—				
Canadian Govt. Rys	4,686·39	–	40,939,946	43,436,668
Canadian Northern	9,598·37	453,256,248	57,155,145	60,513,044
Canadian Pacific, including leased lines	13,442·30	663,538,732	185,188,951	147,255,641
Central Canada	72·12	3,536,722	75,353	167,673
Central Vermont	124·68	2,161,915	509,676	412,386
Crows Nest Southern	74·18	4,295,000	218,386	260,452
Cumberland Railway and Coal Co	32·00	–	190,778	178,630
Detroit River Tunnel	3·26	21,000,000	–	–
Dominion Atlantic	288·36	8,431,500	2,056,220	1,626,573
Eastern British Columbia	14·00	420,000	21,152	46,165
Edmonton, Dunvegan and British Columbia	407·08	11,916,925	1,070,463	1,008,745
Essex Terminal	21·00	1,120,000	265,656	203,093
Esquimalt and Nanaimo	199·20	7,332,000	1,453,549	934,235
Fredericton and Grand Lake	31·10	605,000	221,372	120,698
Grand Trunk Pacific (including branch lines)	2,681·21	221,504,523	18,516,978	22,809,844
Grand Trunk System	3,589·58	484,260,237	77,700,019	70,317,813
Greater Winnipeg Water District	92·00	1,779,030	81,474	106,666
Hereford	53·06	1,600,000	86,644	225,292
International Bridge Co.	1·02	2,012,260	–	–
Inverness Railway and Coal Co	60·91	2,176,546	210,908	224,065
International Bridge and Terminal Co	2·58	300,000	–	–
Kent Northern	29·00	53,986	37,252	39,816
Kettle Valley	357·38	15,960,000	1,225,066	1,417,045
Lake Erie and Detroit River	–	4,400,000	–	–
Lake Huron and Northern Ontario	–	1,190,000	–	–
Lotbinière and Mégantic	–	–	–	–
Maine Central	5·10	–	23,273	39,423
Midland Railway of Manitoba	6·40	4,800,000	455,848	509,220
Maritime Coal and Ry. Co	16·47	3,788,600	136,739	94,885
Massawippi Valley	35·48	800,000	325,485	395,963
Montreal and Atlantic	184·60	5,243,000	1,639,105	1,679,263
Morrissey, Fernie and Michel	10·85	1,263,000	99,406	99,336
Manitoba Great Northern	91·92	2,666,000	69,643	128,167
Napierville Junction	28·46	600,000	546,092	384,851
Nelson and Fort Sheppard	54·84	2,846,800	92,493	186,819
New Brunswick Coal and Ry. Co	59·20	[1]	67,179	91,015
New Westminster Southern	3·72	600,000	385	2,305
North Shore, N.B.	–	133,000	–	–
Northern New Brunswick and Seaboard	–	595,500	–	–
Ottawa and New York	56·81	2,100,000	335,436	462,161
Père Marquette in Canada	199·04	3,000,000	4,773,091	3,409,916
Pacific Great Eastern	361·20	58,414,216	432,071	821,105
Phillipsburg Ry. and Quarry Co	–	164,500	–	–
Quebec Central	295·53	10,345,010	2,725,582	2,165,462
Quebec Oriental	100·00	2,224,314	283,794	254,084
Quebec Ry., Light and Power Co	28·60	–	184,274	178,376
Quebec, Montreal and Southern	190·78	7,000,000	602,405	1,002,081
Roberval and Saguenay	37·00	2,630,000	341,617	241,133
Red Mountain	–	412,600	24	936
Rutland and Noyan	3·36	200,000	5,115	7,293
St. Clair Tunnel	2·24	3,200,000	–	–
St. Lawrence and Adirondack	46·14	2,155,567	972,209	762,854
St. John and Quebec	–	7,111,977	–	–
Sydney and Louisburg	77·49	[3]	1,560,901	1,396,557
Temiscouata	123·17	4,099,669	402,851	339,349
Timiskaming and Northern Ontario[4]	328·50	–	4,547,601	3,536,883
Thousand Islands	6·08	110,000	75,031	55,856
Toronto, Hamilton and Buffalo	99·95	9,867,500	2,444,381	1,917,637
Van Buren Bridge Co	1·07	500,000	–	–
Vancouver, Victoria and Eastern	230·75	23,500,000	795,381	909,689
Wabash Ry. Co. in Canada	–	–	5,070,109	4,447,230
Total	**39,773·26**	**2,159,277,131**	**440,687,128**	**393,927,406**

[1] Owned and operated by New Brunswick Government. [2] Not operating. [3] General capital of Dominion Coal Co. [4] Constructed and operated by Ontario Government Commission.

The railways as a whole reduced the operating ratio from 92·26 p.c. in 1921 to 89·39 p.c. in 1922 and increased net operating revenues by $11,332,035, by a reduction of operating expenses. Although over five million more tons of freight were carried, and the ton miles increased by 14 p.c. through reductions in freight rates, freight revenues showed a decline of $4,020,214 or 2·5 p.c., while with reduced rates and a decline of 5 p.c. in the number of passengers carried, passenger revenues fell off by $10,731,022 or 12 p.c. and total revenues by $17,321,764 or 3·8 p.c. Operating expenses were reduced by $28,653,799 or 6·5 p.c., maintenance of way and structures by $8,380,790 and maintenance of equipment by $3,632,815, a total of $12,013,605, while transportation expenses were reduced by $18,574,625 in spite of the heavier freight traffic of 14 p.c. and an increase of 3 p.c. in train mileage.

6.—Steam Railway Statistics, years ended June 30, 1901-1919, and for calendar years 1919-1922.

Years.	Miles in operation.	Total Train miles.	Passengers carried.	Freight.	Gross Earnings.	Operating Expenses.	Ratio of expenses to receipts.
	No.	No.	No.	Tons.	$	$	p.c.
1901	18,140	53,349,394	18,385,722	36,999,371	72,898,749	50,368,726	69·06
1902	18,714	55,729,856	20,679,974	42,376,527	83,666,503	57,343,592	68·54
1903	18,988	60,382,920	22,148,742	47,373,417	96,064,527	67,481,524	70·25
1904	19,431	61,312,002	23,640,765	48,097,519	100,219,436	74,563,162	74·40
1905	20,487	65,934,114	25,288,723	50,893,957	106,467,198	79,977,573	75·12
1906	21,353	72,723,482	27,989,782	57,966,713	125,322,865	87,129,434	69·52
1907	22,452	75,115,765	32,137,319	63,866,135	146,738,214	103,748,672	70·70
1908	22,966	78,637,526	34,044,992	63,071,167	146,918,314	107,304,143	73·04
1909	24,104	79,662,216	32,683,309	66,842,258	145,056,336	104,600,084	72·11
1910	24,731	85,409,241	35,894,575	74,482,866	173,956,217	120,405,440	69·22
1911	25,400	89,716,533	37,097,718	79,884,282	188,733,494	131,034,785	69·43
1912	26,727	100,930,271	41,124,181	89,444,331	219,403,753	150,726,540	68·70
1913	29,304	113,437,208	46,185,968	106,992,710	256,702,703	182,011,690	70·90
1914	30,795	107,895,272	46,702,280	101,393,989	243,083,539	178,975,259	73·63
1915	35,582	93,218,479	46,322,035	87,204,838	199,843,072	147,731,099	73·92
1916	37,434	111,075,890	43,503,459	100,659,088	261,888,654	180,542,259	68·94
1917	38,604	115,797,100	48,106,530	121,916,272	310,771,479	222,890,637	71·72
1918	38,879	109,857,560	44,948,638	127,543,687	336,220,150	273,955,436	82·96
1919	38,896	103,832,835	43,754,194	116,699,572	382,976,901	341,866,509	89·27
1919 (Dec. 31)	39,058	107,053,735	47,940,456	111,487,780	408,598,361	376,789,093	92·22
1920 (")	39,384	117,384,819	51,318,422	127,429,154	492,101,104	478,248,154	97·18
1921 (")	39,771	104,652,167	46,793,251	103,131,132	458,008,891	422,581,205	92·26
1922 (")	39,773	107,625,144	44,283,620	108,530,518	440,687,128	393,927,406	89·39

7.—Earnings and Operating Expenses of Steam Railways per mile of line and per train mile, for the years ended June 30, 1909-1919, and for calendar years 1919-1922.

Years.	Gross Earnings.	Operating Expenses.	Net Earnings.	Gross Earnings.	Operating Expenses.
	Per mile of line.			Per train mile.	
	$	$	$	$	$
1909	6,017·89	4,339·53	1,678·36	1·816	1·309
1910	7,033·93	4,868·60	2,165·33	2·036	1·409
1911	7,430·45	5,158·85	2,271·60	2·103	1·460
1912	8,209·07	5,639·48	2,569·59	2·173	1·493
1913	8,760·50	6,211·38	2,549·12	2·263	1·604
1914	7,893·60	5,811·83	2,081·77	2·253	1·659
1915	5,616·41	4,151·57	1,464·84	2·144	1·585
1916	6,943·00	4,823·00	2,120·00	2·358	1·623
1917	8,051·00	5,774·00	2,277·00	2·683	1·925
1918	8,493·54	7,046·00	1,447·54	3·006	2·494
1919	9,846·18	8,789·00	1,057·18	3·683	3·292
1919 (Dec. 31)	10,461·32	9,645·00	816·32	3·817	3·520
1920 (")	12,495·00	12,143·00	352·00	4·192	4·074
1921 (")	11,516·00	10,625·00	891·00	4·376	4·038
1922 (")	11,080·00	9,904·00	1,176·00	4·095	3·660

8.—Distribution of Operating Expenses of Steam Railways for the calendar years 1919-1922.

Items of Expenditure.	1919.		1920.		1921.		1922.	
	$	p.c.	$	p.c.	$	p.c.	$	p.c.
Ways and structures	82,343,530	21·85	100,186,413	20·95	88,268,355	20·89	79,887,565	20·28
Equipment	85,577,378	22·71	115,613,430	24·17	97,447,141	23·06	93,814,326	23·82
Traffic expenses	7,242,438	1·92	9,648,506	2·02	11,302,676	2·67	12,925,589	3·28
Transportation	184,214,447	48·90	233,473,462	48·82	209,583,746	49·60	191,009,121	48·49
General expenses	17,411,300	4·62	19,326,343	4·04	15,979,287	3·78	16,290,805	4·13
Total	**376,789,093**	**100·00**	**478,248,154**	**100·00**	**422,581,205**	**100·00**	**393,927,406**	**100·00**

9.—Summary Analysis of Statistics of Passenger and Freight Services and Receipts, 1910-1922.

PASSENGERS.

Years ended June 30.	Number of Passengers carried.	Number of Passengers carried one mile.	Number of Passengers carried one mile per mile of line.	Average Receipts per passenger per mile.
	No.	No.	No.	cents.
1910	35,894,575	2,466,729,664	99,742	1·866
1911	37,097,718	2,605,968,924	102,597	1·944
1912	41,124,181	2,910,251,636	108,888	1·943
1913	46,185,968	3,265,656,080	111,353	1·973
1914	46,702,280	3,089,031,194	100,309	2·007
1915	46,322,035	2,483,708,745	69,802	2·021
1916	43,503,459	2,727,122,648	72,611	1·954
1917	48,106,530	3,150,127,428	79,829	1·946
1918	44,948,638	3,161,082,402	81,306	2·122
1919	43,754,194	3,074,664,369	79,048	2·557
1919 (Dec. 31)	47,940,456	3,658,492,716	93,668	2·631
1920 (")	51,318,422	3,522,494,856	89,440	2·916
1921 (")	46,793,251	2,960,853,955	74,448	3·036
1922 (")	44,421,859	2,814,351,501	70,760	2·820

Years ended June 30.	Average Receipts per passenger.	Average passenger journey in miles.	Average number of passengers per train.	Passenger revenue per passenger train mile.
	$	Miles.	No.	$
1910	1·282	69	59	1·313
1911	1·360	70	60	1·348
1912	1·375	71	62	1·390
1913	1·394	71	62	1·223
1914	1·328	66	59	1·185
1915	1·083	54	50	1·016
1916	1·083	55	53	1·042
1917	1·140	59	59	1·160
1918	1·492	70	64	1·709
1919	1·796	70	63	2·012
1919 (Dec. 31)	2·008	76	70	2·259
1920 (")	2·002	68	64	2·360
1921 (")	1·921	63	57	2·300
1922 (")	1·780	63	55	2·100

9.—Summary Analysis of Statistics of Passenger and Freight Services and Receipts, 1910-1922—concluded.

FREIGHT.

Years ended June 30.	Tons of Freight carried.	Tons of Freight carried one mile.	Tons carried one mile per mile of line.	Freight receipts per ton per mile.
	Tons.	Tons.	Tons.	cents.
1910	74,482,866	15,712,127,701	635.321	0·739
1911	79,884,282	16,048,478,295	631,829	0·777
1912	89,444,331	19,558,190,527	731,776	0·757
1913	106,992,710	23,032,951,596	785,820	0·758
1914	101,393,989	22,063,294,685	716.359	0·742
1915	87,204,833	17,661,309,723	496.355	0·751
1916	109,659,088	28,195,364,264	753.202	0·653
1917	121,916,272	31,186,707,851	807.948	0·690
1918	127,543,687	31,029,072,279	798.093	0·736
1919	116,699,572	27,724,397,202	712,783	0·962
1919 (Dec. 31)	111,487,780	26,950,598,322	690,015	1·003
1920 (")	127,429,154	31,894,411,479	809.832	1·071
1921 (")	103,131,132	26,621,630,554	669.373	1·200
1922 (")	108,530,518	30,367,885,883	763,530	1·039

Years ended June 30.	Receipts per ton hauled.	Average length of freight haul in miles.	Average train load in net tons.	Average number of freight tons per loaded car.	Revenue per freight train mile.
	$	Miles.	Tons.	Tons.	$
1910	1·560	–	311	17·13	2·316
1911	1·561	–	305	16·91	2·376
1912	1·655	–	325	17·87	2·494
1913	1·636	216	342	19·01	2·595
1914	1·614	217	353	19·18	2·619
1915	1·520	202	344	18·43	2·279
1916	1·679	257	411	20·91	2·686
1917	1·766	256	436	22·24	3·006
1918	1·789	243	457	23·10	3·359
1919	2·286	238	442	23·46	4·256
1919 (Dec. 31)	2·427	242	434	22·21	4·358
1920 (")	2·680	250	457	23·05	4·892
1921 (")	3·100	258	447	22·12	5·370
1922 (")	2·910	280	481	23·03	5·000

10.—Number of Steam Railway Employees, Amount of Salaries and Wages, and Ratios of the latter to Gross Earnings and Operating Expenses for years ended June 30, 1907-1919, and for calendar years 1919-1922.

Years ended June 30.	Employees.	Salaries and wages.	Ratio to gross earnings.	Ratio to operating expenses.
	No.	$	p.c.	p.c.
1907	124,012	58,719,493	40·01	56·60
1908	106,404	60,376,607	41·09	56·26
1909	125,105	63,216,662	43·58	60·43
1910	123,768	67,167,793	38·61	55·78
1911	141,224	74,613,738	39·53	56·94
1912	155,901	94,237,623	39·79	57·92
1913	178,652	115,749,825	45·09	63·59
1914	159,142	111,762,972	45·97	62·43
1915	124,142	90,215,727	45·15	61·09
1916	144,770	104,300,647	39·82	57·95
1917	146,175	129,626,187	41·85	58·34
1918	143,493	152,274,953	46·14	55·59
1919	158,777	208,939,995	54·56	61·12
1919 (Dec. 31)	173,728	233,323,674	57·10	61·92
1920 (")	185,177	290,510,518	59·04	60·74
1921 (")	167,627	247,756,138	54·09	58·63
1922 (")	165,635	233,294,040	52·94	59·20

Numerous wage adjustments during the year 1922 resulted in a net reduction in the average hourly rate of pay of employees on all railways of 7 p.c. The cuts extended throughout practically all classes of employees, the largest being that of 15 p.c. in the wages of section men; five classes show slight increases. There was an average of 1,992 fewer employees or 1·2 p.c., but the saving in wages was $14,462,098 or 5·8 p. c. compared with the previous year.

11.—Mileage and Rolling Stock of Steam Railways for years ended June 30, 1918 and 1919, and for calendar years 1919-1922.

Mileage and Equipment.	Year ended June 30.		Year ended December 31.			
	1918.	1919.	1919.	1920.	1921.	1922.
Mileage and Engines.	No.	No.	No.	No.	No.	No.
Miles in operation (single track)	38,879	38,896	39,058	39,384	39,771	39,773
Miles of sidings	9,238	9,176	9,481	9,608	9,755	9,892
Miles of double track	2,523	2,543	2,547	2,590	2,629	2,608
Engines in use	5,756	5,879	5,947	6,030	6,027	5,955
Passenger Cars.						
First class	2,172	2,172	2,209	2,212	2,218	2,057
Second class	595	618	592	582	552	514
Combination	406	396	382	362	350	348
Immigrant	568	701	671	673	677	697
Dining	196	203	204	196	223	209
Parlour	166	164	162	187	173	194
Sleeping	555	550	548	584	645	640
Baggage, express and postal	1,514	1,513	1,584	1,479	1,807	1,863
Other	204	195	186	282	122	310
Freight Cars.						
Box	150,074	153,520	154,044	155,964	161,259	158,622
Flat	23,414	24,768	25,657	24,939	24,391	24,186
Stock	8,556	9,189	11,023	11,164	12,585	11,542
Coal	16,949	18,375	17,908	20,249	20,079	20,557
Tank	485	419	414	414	413	405
Refrigerator	5,893	6,622	5,591	6,204	7,012	6,463
Other	3,664	4,965	5,158	5,555	5,824	6,800

12.—Commodities hauled as Freight on Steam Railways during the calendar years 1920, 1921 and 1922.

Products.	1920.	1921.	1922.
	Tons.	Tons.	Tons.
Agricultural and Vegetable Products—			
Wheat	7,323,428	10,401,244	13,142,064
Corn	736,889	1,595,774	1,732,221
Oats	2,181,561	2,937,774	3,125,602
Barley	415,498	725,619	800,911
Rye	430,189	280,292	522,403
Flaxseed	127,975	202,962	143,777
Other grain	3,207,893	225,925	170,218
Flour	2,853,387	3,401,848	3,664,264
Other mill products	1,563,196	1,531,638	1,751,054
Hay and straw	1,664,054	944,435	1,028,835
Cotton	237,914	181,545	243,869
Apples (fresh)	324,405	360,788	358,043
Other fruit (fresh)	376,615	388,610	425,889
Potatoes	788,217	568,292	548,187
Other fresh vegetables	212,961	199,180	231,493
Other agricultural and vegetable products	860,797	779,161	661,571
Total	**23,304,979**	**24,724,495**	**28,550,401**
Animals and Animal Products—			
Horses	120,911	102,999	87,793
Cattle and calves	1,061,143	692,447	907,110
Sheep	70,125	98,305	89,776
Hogs	243,311	276,230	319,828
Dressed meats (fresh)	695,743	592,459	681,493
Dressed meats (cured or salted)	120,083	203,883	262,565

12.—Commodities hauled as Freight on Steam Railways during the calendar years 1920, 1921 and 1922—concluded.

Products.	1920.	1921.	1922.
	Tons.	Tons.	Tons.
Animals and Animal Products—concluded			
Other packing house products	489,734	296,688	212,573
Poultry	78,828	73,788	72,437
Eggs	90,461	148,744	156,611
Butter and cheese	196,957	262,070	280,247
Wool	101,533	70,479	75,881
Hides and leather	260,301	189,374	223,965
Other animals and animal products	272,000	133,812	121,219
Total	**3,801,130**	**3,131,278**	**3,491,498**
Mine Products—			
Anthracite coal	9,513,891	7,888,165	4,571,101
Bituminous coal	22,933,445	18,834,216	17,867,111
Lignite coal	240,249	434,226	261,732
Coke	1,109,449	436,911	743,767
Iron ore	899,546	218,315	355,728
Other ores and concentrates	2,127,184	966,454	1,099,793
Base bullion and matte	173,851	87,859	77,227
Clay, gravel, sand, stone (crushed)	4,473,155	4,165,439	4,755,767
Slate-dimension or block stone	1,216,140	607,460	747,738
Crude petroleum	1,051,066	283,541	282,148
Asphaltum	248,672	141,864	164,894
Salt	367,135	352,080	436,753
Other mine products	782,245	422,465	595,629
Total	**45,075,968**	**34,838,995**	**31,959,388**
Forest Products—			
Logs, posts, poles, cordwood	2,517,580	2,801,149	3,187,239
Ties	405,211	558,243	269,530
Pulp wood	3,932,206	6,053,903	4,914,220
Lumber, timber, box shooks, heading	10,572,971	6,704,523	8,729,649
Other forest products	4,850,912	789,175	721,437
Total	**22,278,880**	**16,906,993**	**17,822,075**
Manufactures and Miscellaneous—			
Refined petroleum and its products	1,263,856	1,682,411	1,696,095
Sugar	1,166,039	762,789	941,733
Iron—pig and bloom	1,352,921	347,709	544,269
Rails and fastenings	751,077	325,706	347,997
Bar and sheet iron—structural iron and iron pipe	2,231,908	1,106,393	1,323,942
Castings, machinery and boilers	1,325,906	607,484	632,728
Cement	1,176,451	1,089,615	1,266,080
Brick and artificial stone	1,912,172	775,224	1,173,727
Lime and plaster	276,039	373,845	499,889
Sewer pipe and drain tile	77,112	118,384	140,936
Agricultural implements and vehicles other than auto's	756,424	333,575	252,867
Automobiles and auto trucks	563,301	544,702	932,457
Household goods	197,727	167,920	140,349
Furniture	197,336	94,339	105,537
Liquor and beverages	279,063	161,381	165,759
Fertilizers, all kinds	222,552	313,276	327,532
Paper, printed matter, books	1,624,809	1,662,588	2,331,194
Wood pulp	1,877,805	1,493,284	2,176,698
Fish (fresh, frozen, cured, etc.)	182,943	160,057	165,471
Canned meats	10,992	15,514	11,283
Canned goods (all canned food products other than meat)	305,662	330,315	381,437
Other manufactures and miscellaneous	10,061,340	6,223,532	6,563,678
Merchandise	5,111,959	4,812,177	4,610,009
Total	**32,925,394**	**23,502,220**	**26,665,667**
Grand Total	**127,429,154**[1]	**103,131,132**[2]	**108,530,518**[3]

[1] 42,803 tons not classified
[2] 27,151 tons Thousands Islands Rly., not distributed.
[3] 41,489 tons Thousand Islands Rly., not distributed.

Government Aid to Private Railways.—In order that the private railways of Canada might be constructed in advance of settlement as colonization roads, or through thinly-settled districts where little traffic was available, it was necessary for Dominion, Provincial and even Municipal Governments to extend some form of assistance. In our earlier history, when our Governments had plenty of Crown land and little cash, the subsidies granted to railways frequently took the form of land grants, which had the advantage of giving the railway a direct interest in opening up the country, though it sometimes led to the railways holding large tracts of land idle for speculative purposes when intermixed Crown lands had been homesteaded, thus retarding the settlement of agricultural land. Table 13 shows the areas of the land granted as subsidies to steam railway companies by the Dominion and Provincial Governments, with the names of the companies in the case of the Dominion Government. The total area so granted up to Dec. 31, 1922, extended to 46,735,987 acres.

As the country grew wealthier, the objections to the land grant method became more apparent, and aid was more frequently given in the form of a cash subsidy per mile of line, a loan, or a subscription to the shares of the railway. From 1851 up to Dec. 31, 1922, as shown analytically in Table 15, the total value of such aid granted to steam railways in Canada, exclusive of the capital of two Government railways (I.C.R. and P.E.I.R.), amounted to $722,648,946. Of this sum $662,843,886 represents aid granted by the Dominion Government, $43,414,386 that granted by the Provincial Governments, and $16,390,674, that granted by municipalities. Table 14 records the details of the most recent type of assistance given to private railways, *viz.*, by the guaranteeing of their bonds or of the interest thereupon. These guarantees enabled the railways receiving them to borrow money, generally from British investors, at rates of interest considerably lower than would otherwise have had to be paid. Up to Dec 31, 1922, guarantees amounting to $447,490,378 had been authorized by the Dominion and Provincial Governments, of which the total amount outstanding amounted to $404,601,953.

13.—Areas of Land Subsidies granted to Steam Railways by the Dominion and Provincial Governments up to Dec. 31, 1922.

By the Dominion Government.	Acres.
Alberta Railway and Coal Co.	1,101,712
Alberta and Great Waterways Railway Co.	1,198
Canadian Pacific Railway Co. (main line)	18,203,748
Calgary and Edmonton Railway Co.	1,818,017
Great North West Central Railway Co.	320,000
Manitoba Northwestern Railway Co.	1,500,992
Manitoba Southwestern Col. Railway Co.	1,396,473
Saskatchewan and Western Railway Co.	98,880
C.P.R.—Souris Branch	1,406,932
C.P.R.—Pipestone Extension, Souris Branch	200,094
Canadian Northern Railway Co.	3,167,550
Manitoba and Southeastern Railway Co.	679,898
Qu'Appelle, Long Lake and Saskatchewan Railroad and Steamboat Co.	1,622,922
Edmonton, Dunvegan and British Columbia Railway Co.	3,821
Grand Trunk Pacific Railway Co.	10,002
Grand Trunk Pacific Branch Lines Co.	1,789
Total by Dominion Government	**31,534,028**
By Provincial Governments.	
Nova Scotia	160,000
New Brunswick	1,788,392
Quebec[1]	1,778,950
Ontario	3,241,207
British Columbia	8,233,410
Total by Provincial Governments	**15,201,959**
Total by Dominion and Provincial Governments	**46,735,987**

[1] Not including convertible land grants by the government of this province.

14.—Railway Bonds Guaranteed by Dominion and Provincial Governments.

Governments.	Amount Authorized.	Amount Outstanding Dec. 31, 1922.
	$	$
New Brunswick	8,028,977	8,028,977
Quebec	126,000	126,000
Ontario	7,860,000	7,860,000
Manitoba	25,663,553	25,662,546
Saskatchewan	47,725,000	28,582,012
Alberta	41,724,410	35,488,128
British Columbia	68,135,000	60,317,524
Total by Provincial Governments	199,261,940	166,065,187
Dominion Government	248,227,438	238,536,766
Grand Total	**447,490,378**	**404,601,953**

15.—Analysis of the Total Financial Aid given to Steam Railways up to Dec. 31, 1922.

By the Dominion Government.		By Provincial Governments.	
	$		$
Cash subsidies	121,308,478	Cash subsidies	33,537,914
		Loans	9,576,472
Loans	498,590,036	Subscription to shares	300,000
Paid to Quebec Government	5,160,053	**Total**	**43,414,386**
Cost of lines handed over to C.P.R.	37,785,319	By Municipalities.	
		Cash subsidies	12,893,529
		Loans	1,071,645
		Subscription to shares	2,425,500
		Total	**16,390,674**
Total	**662,843,886**	**Grand Total**	**722,648,946**

Tables **16** and **17**, from the Annual Report of the Department of Railways and Canals, show the capital expenditure and current financial operations of the Dominion Government on the Canadian Government Railways to the end of the fiscal year 1922.

16.—Cost of Construction, Working Expenses and Revenue of Canadian Government Railways, for the fiscal years 1868-1900, 1901-1922, and before Confederation.

Years.	Capital Expenditure.	Working Expenses.	Revenue.	Surplus (+) and deficit (−).
	$	$	$	$
Before Confederation	13,881,461	–	–	–
1868-1900	114,091,210	81,391,472	73,226,382	−8,165,090
1901	3,922,989	5,739,652	5,213,381	−525,671
1902	5,386,611	5,861,099	5,918,990	+57,891
1903	3,083,681	6,474,134	6,584,599	+110,465
1904	2,619,060	7,599,959	6,627,256	−972,703
1905	6,125,482	8,906,154	7,050,892	−1,855,262
1906	6,102,566	7,893,653	7,950,553	+56,900
1907 (9 mos.)	7,174,376	6,328,746	6,509,186	+180,440
1908	23,684,005	9,595,295	9,534,569	−60,726
1909	29,414,227	9,764,587	8,894,420	−870,167
1910	21,505,976	9,095,904	9,647,964	+552,060
1911	24,532,466	10,037,879	10,249,394	+211,515
1912	23,108,806	11,074,853	11,034,166	−40,687
1913	17,375,968	12,499,926	12,442,203	−57,723
1914	21,628,095	13,559,225	13,394,317	−164,908
1915	21,865,664	12,474,454	12,149,357	−325,097

16.—Cost of Construction, Working Expenses and Revenue of Canadian Government Railways, for the fiscal years 1868-1900, 1901-1922, and before Confederation—concluded.

Years.	Capital Expenditure.	Working Expenses.	Revenue.	Surplus (+) and deficit (−).
	$	$	$	$
1916	21,155,255	19,407,380	18,427,909	−979,471
1917	12,003,650	25,795,907	23,539,759	−2,256,148
1918	34,699,417	33,400,460	27,240,957	−6,159,503
1919	40,193,181	43,889,626	38,013,726	−5,875,900
1920	11,593,148	48,194,710	41,402,061	−6,792,649
1921	5,096,535	43,770,971	36,814,350	−6,956,621
1922	4,553,638	47,114,746	40,787,945	−6,326,801
Total	**474,797,361**[1]	**477,283,962**	**432,654,337**	**−44,629,625**

[1] Less $40,000 received from St. John City for the Carleton Branch railway=$474,757,361. Cost of Quebec Bridge not included, nor $16,000 miscellaneous expenditure in 1914.

NOTE.—For the years 1868 to 1900, see Canada Year Book, 1916-17, page 437. For details regarding composition, ownership and management of Government Railways, see introduction to the section.

17.—Capital Expenditure on Government Railways to March 31, 1922.

Railways.	Expenditures.
	$
Canadian Government Railways—	
Intercolonial Railway System—	
Canada Eastern Railway	819,000
Cape Breton Railway	3,969,670
Drummond County Railway	1,464,000
Eastern Extension Railway	1,324,043
Montreal and European Railway	333,943
Oxford and New Glasgow Railway	1,949,063
Intercolonial Railway	135,508,771
Total	145,368,490
New Brunswick and Prince Edward Island Railway	796,542
Prince Edward Island Railway	12,836,775
International Railway of New Brunswick	2,936,114
National Transcontinental Railway	168,487,927
Moncton and Buctouche Railway	272,168
Salisbury and Albert Railway	431,903
St. Martin's Railway	299,911
Elgin and Havelock Railway	134,550
York and Carleton Railway	29,760
Quebec and Saguenay Railway	7,737,851
Caraquet and Gulf Shore Railway	517,972
Lotbinière and Megantic Railway	356,193
Hudson Bay Railway	20,536,106
Canadian Government Railways (rolling stock)	39,864,148
Quebec Bridge	14,831,743
Total	415,438,154
Other Railways and Miscellaneous—	
Canadian Northern Railway	10,000,000
Annapolis and Digby Railway	660,683
European and North American Railway	88,363
Nova Scotia Railway	208,510
Carleton Branch Railway	48,410
Canadian Pacific Railway	62,789,776
Yukon Territory Works, Stikine Teslin Railway	283,324
Governor-General's Cars	71,539
Miscellaneous expenditure	18,345
Grand Total Capital Expenditure	**489,607,104**

Railway Accidents.—The number of passengers, employees and others killed and injured in steam railway accidents from 1888 to 1922 is given in summary form in Table 18. and in a detailed analysis for 1920 to 1922 in Table 19. Attention is directed to the great reduction since 1913 in the number killed and to the increase

in the number injured. It is probably the case that injuries are much more completely reported than in the past, especially in view of the workmen's compensation legislation of the provinces.

18.—Number of Passengers, Employees and others killed and injured on Steam Railways for the years ended June 30, 1888-1919, and for calendar years 1919-1922.

Years.	Passengers.		Employees.		Others.		Totals.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
1888-1900	176	966	1,104	8,459	1,661	1,785	2,941	11,210
1901	16	135	118	970	183	212	317	1,317
1902	14	176	152	932	164	220	330	1,328
1903	53	258	186	945	181	250	420	1,453
1904	25	234	192	912	178	259	395	1,407
1905	35	244	208	919	225	194	468	1,355
1906	16	233	139	890	206	242	361	1,365
1907	70	355	259	1,569	269	228	598	2,152
1908	28	345	224	1,793	184	222	436	2,360
1909	36	281	209	1,679	260	226	505	2,186
1910	62	279	295	1,605	258	255	615	2,139
1911	28	297	227	2,715	236	317	493	3,329
1912	48	493	234	2,924	288	363	568	3,780
1913	41	667	324	3,467	377	498	742	4,572
1914	27	415	224	3,161	349	463	600	4,039
1915	17	336	115	2,573	247	362	379	3,271
1916	20	309	174	4,332	274	337	468	4,978
1917	24	438	269	4,596	219	401	452	5,435
1918	32	344	178	5,352	200	393	410	6,089
1919	36	307	174	5,432	176	412	386	6,151
Total, to June 30, 1919	**804**	**7,112**	**4,945**	**55,165**	**6,135**	**7,639**	**11,884**	**69,916**
1919[1]	34	392	197	6,349	209	476	440	7,217
1920[1]	29	481	167	7,719	197	480	393	8,680
1921[1]	5	259	156	6,583	193	394	354	7,236
1922[1]	11	369	122	8,361	208	517	341	9,247

NOTE.—For the years 1888 to 1900, see Canada Year Book, 1916-17, page 443. [1]Calendar year.

19.—Number of Persons Killed and Injured on Steam Railways for the calendar years 1920 to 1922.

(A) IN ACCIDENTS RESULTING FROM MOVEMENT OF TRAINS, LOCOMOTIVES OR CARS.

Descriptions of Persons.	1920.		1921.		1922.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Passengers	28	456	5	227	11	336
Employees	145	2,513	127	2,024	107	2,440
Trespassers	106	170	91	113	104	124
Non-trespassers	78	237	97	204	96	311
Postal clerks, expressmen, etc	3	26	3	24	5	45
Total	**360**	**3,402**	**323**	**2,592**	**323**	**3,256**
Description of Accident—						
Coupling and uncoupling	12	242	4	136	5	131
Collisions	29	223	9	127	9	133
Derailments	23	313	15	199	11	308
Parting of trains	–	43	1	22	–	42
Locomotives or cars breaking down	–	74	–	47	–	37
Falling from trains or cars	22	419	15	300	22	408
Jumping on or off	8	308	10	260	10	268
Struck by trains, etc	70	165	54	89	49	111
Overhead obstruction	–	31	2	31	1	20
Other causes	9	1,151	22	1,040	11	1,318
Total	**173**	**2,969**	**132**	**2,251**	**118**	**2,776**

19.—Number of Persons Killed and Injured on Steam Railways for the calendar years 1920 to 1922—concluded.

(B) In Accidents other than those Resulting from Movement of Trains, Locomotives or Cars.

Description of Persons.	1920.		1921.		1922.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Stationmen	–	710	1	380	–	506
Shopmen	5	1,950	7	1,623	5	2,180
Trainmen and Trackmen	6	1,355	13	1,571	5	2,145
Other employees	11	1,191	8	985	5	1,090
Passengers	1	25	–	32	–	33
Others	10	47	2	53	3	37
Total	**33**	**5,278**	**31**	**4,644**	**18**	**5,991**

Canadian National Railway Operations.—The operated mileage of Canadian National Railways at December 31, 1922, was 22,665·51. The actual mileage was 22,680·68, made up as follows:—

Canadian Government Railways	4,667·12
Canadian Northern Railway System	9,994·79
Grand Trunk Pacific	2,710·50
Grand Trunk Railway System	4,775·77
Central Vermont Railway	532·50
	22,680·68

The gross operating revenue of all these railways in the calendar year 1922 amounted to $234,111,090 and the operating expenses to $229,917,541, leaving a net revenue from operation of $4,193,549 as compared with a deficit of $11,847,818 in 1921. Including fixed charges, however, the total deficit was $60,251,845 as compared with $72,662,278 in 1921, an improvement of $12,410,433.[1]

20.—Canadian National Railways Train Traffic Statistics for the calendar years 1920, 1921 and 1922.

Items	1920.	1921.	1922.
	Miles.	Miles.	Miles.
Train Mileage—			
Passenger trains	13,322,587	12,701,319	12,237,746
Freight trains	20,988,345	18,649,988	18,472,628
Mixed trains	3,496,965	3,317,850	2,945,234
Total Train Miles (excluding Special Train Miles)	37,807,897	34,669,157	33,655,608
Car Mileage—			
Passenger—			
Coaches, parlor, sleeping and dining cars	55,744,463	58,736,090	60,110,284
Baggage, mail, express, etc	38,149,446	34,306,139	32,406,622
Total Passenger Train Car Miles	93,893,909	93,042,229	92,516,906

[1] For detailed statistics of the operation of the Canadian National Railways during 1922, see the Annual Statement by the Acting Minister of Railways and Canals, in Hansard of March 27, 1923.

20.—Canadian National Railways Train Traffic Statistics for the calendar years 1920, 1921 and 1922—concluded.

Items.		1920.	1921.	1922.
Car Mileage—concluded.				
Freight—				
Loaded freight car miles		420,074,960	389,521,482	424,635,893
Empty freight car miles		168,809,115	211,428,758	219,857,824
Caboose miles		21,224,990	20,584,200	19,682,500
Total Freight Train Car Miles		610,109,065	621,534,440	664,176,217
Passenger cars per passenger traffic train mile		5·58	7·05	7·26
Freight cars per freight traffic train mile		24·92	28·81	31·75
Passenger Traffic—				
Passengers carried (earning revenue)		13,572,245	11,938,149	11,331,226
Passengers carried (earning revenue) one mile		841,636,864	714,748,217	689,391,942
Passengers carried (earning revenue) one mile per mile of road		50,957	41,773	40,022
Average passenger journey—miles		62·01	59·87	60·84
Average amount received per passenger	$	1·66	1·69	1·58
Average amount received per passenger mile	c.	2·68	2·827	2·599
Average number of passengers per train mile		50·04	54·16	54·12
Average number of passengers per car mile		15·10	12·17	11·47
Revenue from passengers per passenger car mile	c.	40·52	34·41	29·81
Total passenger train earnings per train mile	$	1·71	2·13	2·00
Total passenger train earnings per mile of road	$	1,738·52	1,643·66	1,477·72
Freight Traffic—				
Tons of revenue freight carried		25,089,376	21,258,600	22,426,403
Tons of revenue freight carried one mile		9,221,370,748	8,997,713,512	10,091,109,668
Total tons (all classes) freight carried one mile		10,454,247,657	10,295,715,553	11,470,240,341
Tons of non-revenue freight carried one mile		1,232,876,909	1,298,002,041	1,379,130,673
Tons of revenue freight carried one mile per mile of road		558,314	525,865	585,831
Tons of non-revenue freight carried one mile per mile of road		74,645	75,861	80,064
Total tons (all classes) freight carried one mile per mile of road		632,959	601,726	665,895
Average amount received per ton per mile revenue freight	c.	0·983	1·041	0·889
Average number of tons revenue freight per train mile		376·61	417·12	482·41
Average number of tons non-revenue freight per train mile		50·35	60·17	65·93
Average number of tons (all classes) freight per train mile		426·96	477·29	548·34
Average number of tons revenue freight per loaded car mile		21·95	23·10	23·76
Average number of tons non-revenue freight per loaded car mile		2·93	3·33	3·25
Average number of tons (all classes) freight per loaded car mile		24·88	26·43	27·01
Average haul, revenue freight		367·54	423·25	449·97
Freight train earnings per loaded car mile	c.	21·58	24·27	21·35
Freight train earnings per train mile	$	3.70	4.38	4.33
Freight train earnings per mile of road	$	5,489.12	5,525.49	5,262.84

III.—ELECTRIC RAILWAYS.

The cheap and reasonably rapid conveyance of human beings is a necessity of the modern urban life which falls to the lot of an annually increasing percentage of the population of Canada. This necessity of life is supplied throughout Canada by the electric street railway, generally operated by the development of the water powers which are so important a feature of Canadian economic life.

Historical.—Replacing the horse-car systems, used in Montreal and Toronto as early as 1861, electric street railways were first seen in operation in Canada in 1885, when a successful experimental railway was constructed and operated

at the Toronto Exhibition Grounds. Before many years, their safety and convenience resulted in the discarding of the older system. An electric system 7 miles in length was opened at St. Catharines in 1887, using the double overhead trolley. This was followed by the completion of the Ottawa Electric railway in 1891, and the electrification of the Montreal and Toronto systems in 1892. The street railways of other eastern cities were generally electrified during the nineties, while in the newer western cities electricity was used from the commencement. In the cities of the East, electric street railways are generally operated by private companies under franchises from the city, while in a considerable number of cities of Ontario and the West the street railways are owned and operated by the city, a fact which is indicated in Tables **24** and **25** by the word "municipal" in the name of the railway. In 1921, on the expiry of the 30 year franchise of the Toronto Street Railway Company, the line in this second largest city of Canada was taken over by the city and is now being operated by a transportation commission.

Where possible, water-power with turbine engines is used for generating purposes. Where this is not available, steam power is necessary, and although this is a more expensive method, modern devices have greatly reduced the cost per h.p. Many difficulties are met in operating the cars during the winter season, due to snow, ice and sleet. These, however, have been overcome by the use of sweepers, scrapers and plows. The single overhead trolley system has been found the most suitable and is in general use.

Great advances have been made during recent years in the construction and use of suburban or inter-urban lines, their mileage now comprising a large percentage of the total. The greater part of this track is in the Toronto, Niagara and Lake Erie district, on which considerable freight traffic is carried, and on the Pacific coast, where the British Columbia Electric railway operated 421 freight cars in 1920.

Development of Electric Railway Traffic.—Figures for the year 1893 show that 30 companies with a paid-up capital of about $9,000,000 operated 256 miles of railway. By 1897, 35 companies made returns showing 583 miles of track, 1,156 cars, 26,431,017 miles run, 83,811,306 passengers carried and capital of $18,727,355. In 1904, 46 companies showed 766 miles of track, 2,384 cars, 42,066,124 miles run, 181,689,998 passengers, and capital of $30,314,730. Steady increases up to 1922 show that during that year 65 companies actually in operation, had 2,494 miles computed as single track, 5,048 cars, 116,711,189 miles run and 738,908,949 fare passengers carried, with a capital of $188,258,974. The number of employees in the service of electric railways on Dec. 31, 1922, was 18,099 as compared with 17,015 in 1921. Total salaries and wages for the year 1922 were $24,988,119, as against $32,976,728 in 1921.

Statistics of Electric Railways.—Summary statistics of the operation of electric railways in Canada from 1901 to 1922 inclusive are given by years in Table **21**. In Table **22** statistics of the mileage and equipment are given for the last four railway years, and annual statistics of the capital liability of electric railways are furnished from 1908 in Table **23**. Detailed figures for railways of the miles operated, the capital liability, the earnings and operating expenses are given for 1921 in Table **24** and for 1922 in Table **25**, while Table **26** gives by years from 1894 to 1922 the number of passengers, employees and others killed and injured on electric railways in Canada.

21.—Summary Statistics of Electric Railway Operation, years ended June 30, 1901-1919, and for calendar years 1919-1922.

Years.	Single Track Mileage in Operation.	Total Car Mileage.	Passengers.	Freight.	Gross Earnings.	Operating Expenses.	Ratio of Expenses to Receipts.	Number of Employees.
	Miles.	Miles.	No.	Tons.	$	$	p.c.	
1901.....	552·91	31,750,754	120,934,656	287,926	5,768,283	3,435,162	59·55	–
1902.....	557·59	35,833,841	135,681,402	266,182	6,486,438	3,802,855	58·63	–
1903.....	759·36	38,028,529	155,662,812	371,286	7,233,677	4,472,858	61·83	–
1904.....	766·50	42,066,124	181,689,968	400,161	8,453,609	5,326,516	63·01	–
1905.....	793·12	45,859,101	203,467,217	510,350	9,357,125	5,918,194	63·25	–
1906.....	813·74	50,618,836	237,655,074	506,024	10,966,871	6,675,037	60·87	–
1907.....	814·52	53,361,227	273,999,404	479,731	12,630,430	7,373,251	58·38	–
1908.....	992·03	56,964,881	299,099,309	732,475	14,007,049	8,695,880	62·08	–
1909.....	988·97	60,152,846	314,026,671	–	14,611,484	8,885,235	60·81	10,557
1910.....	1,047·07	65,249,166	360,964,876	852,294	17,100,789	10,121,781	59·19	11,390
1911.....	1,223·73	72,618,806	426,296,792	1,228,362	20,356,952	12,096,134	59·42	13,671
1912.....	1,308·17	82,070,064	488,865,682	1,435,525	23,499,250	14,266,675	60·71	14,760
1913.....	1,356·63	89,005,216	597,863,801	1,957,930	28,216,111	17,765,372	62·96	16,351
1914.....	1,560·82	98,917,808	614,709,819	1,845,923	29,691,007	19,107,818	64·36	16,195
1915.....	1,590·29	96,964,829	562,302,373	1,433,602	26,922,900	18,131,842	67·35	14,795
1916.....	1,673·77	82,516,612	580,094,167	1,936,674	27,416,285	18,099,906	66 02	10,622
1917.....	1,743·54	84,073,046	629,441,697	2,333,539	30,237,664	20,098,634	66·47	11,696
1918.....	1,616·36[1]	84,435,323[1]	487,365,456[1]	2,497,530[1]	24,299,890[1]	17,535,975[1]	72·16[1]	11,646[1]
1919.....	1,695·52	106,961,607	686,124,263	2,474,892	35,696,532	26,839,071	75·18	17,242
1919[2].....	1,686·78	110,206,344	749,334,380	2,374,612	40,698,586	31,385,702	77·12	16,940
1920[2].....	1,698·76	114,481,406	804,711,333	2,691,150	47,047,246	37,242,483	79·16	17,341
1921[2].....	1,687·37	111,576,949	719,305,441[3]	2,285,886	44,536,832	35,945,316	80·71	17,015
1922[2].....	1,724·60	116,711,189	738,908,949	2,445,425	49,660,485	35,986,872	72·47	18,099

[1] Not including Montreal Tramways and several other units. [2] Calendar year.
[3] The report of the Toronto Transportation Commission for the last four months of 1921 would increase this number by about 80,000,000 or possibly bring it up to the 1920 record.

22.—Mileage and Equipment of Electric Railways for the calendar years 1919-1922.

Mileage.	1919.	1920.	1921.	1922.
Length of first main track.....	1,686·78	1,698·76	1,687·37	1,724·60
Length of second main track.....	484·63	509·35	499·58	513·22
Total length of main track.....	2,171·41	2,208·11	2,186·95	2,237·82
Length of sidings and turnouts.....	228·16	219·14	238·79	255·96
Total, computed as single track.....	2,399·57	2,427·25	2,425·74	2,493·78

Cars.	1919.	1920.	1921.	1922.
Passenger cars, closed	3,120	3,300	3,257	3,868
Passenger cars, open.	513	371	376	258
Passenger cars, combination.....	766	667	665	115
Freight cars.....	718	669	661	741
Mail, express and baggage cars.....	43	44	45	38
Combination, freight	17	21	18	–
Work cars.....	207	168	213	20
Trackless trolley cars	–	–	–	8
Total cars.....	5,384	5,240	5,235	5,048
Busses	–	–	–	27
Snow ploughs.....	62	60	65	65
Sweepers.....	142	143	134	146
Miscellaneous.....	98	107	89	278
Locomotives.....	48	54	55	56
Total equipment.....	5,734	5,504	5,578	5,620

23.—Capital Liability of Electric Railways, years ended June 30, 1908-1919, and for calendar years 1919-1922.

Years.	Stocks.	Funded Debt.	Total.	Years.	Stocks.	Funded Debt.	Total.
	$	$	$		$	$	$
1908.....	50,295,266	37,114,619	87,409,885	1916.....	67,738,275	87,157,309	154,895,584
1909.....	51,946,433	39,658,556	91,604,989	1917.....	70,606,520	90,628,219	161,234,739
1910.....	58,653,826	43,391,153	102,044,979	1918.....	73,864,820	93,388,273	167,253,093
1911.....	62,251,203	49,281,144	111,532,347	1919.....	93,042,368	78,852,188	171,894,556
1912.....	70,829,118	52,012,828	122,841,946	1919.....	91,757,418	81,283,922	173,041,340
1913.....	62,079,767	79,155,864	141,235,631	1920.....	91,321,955	79,504,449	170,826,404
1914.....	66,311,098	81,284,244	147,595,342	1921.....	91,169,885	86,017,551	177,187,436
1915.....	66,696,675	83,647,327	150,344,002	1922.....	76,949 185	111,309,789	188,258,974

NOTE.—The totals here given do not include $493,346 aid paid by Governments and Municipalities.

24.—Mileage operated, Capital, Earnings and Operating Expenses of Electric Railways in Canada, year ended Dec. 31, 1921.

Name of Railway.	Mileage operated.	Capital Liability.	Earnings.	Operating expenses.
	No.	$	$	$
Brandon Municipal[1]	9·90	450,000	43,932	58,811
Brantford and Hamilton	23·19	960,000	288,049	150,640
Brantford Municipal[1]	19·28	520,000	191,951	199,388
British Columbia	244·84	17,527,384	5,424,238	4,415,535
Calais Street	7·00	200,000	57,968	52,213
Calgary Municipal[1]	66·50	2,365,173	940,456	653,862
Canadian Resources Development Co	1·75	14,843	58	939
Cape Breton Electric Co	30·59	2,535,000[4]	375,821	321,725
Chatham, Wallaceburg and Lake Erie	36·73	1,455,100	198,179	152,821
Cornwall Street Railway, Light and Power Co	4·00	200,000	53,933	46,113
Edmonton Radial[1]	32·82	3,143,121	788,580	580,376
Fort William Street[1]	11·03	1,337,000	191,963	170,136
Fort William Terminal Ry. and Bridge Co	–	125,000	–	–
Grand River	18·63	551,000	353,316	300,089
Guelph Radial[1]	8·49	266,000	77,327	76,064
Hamilton and Dundas Street	6·98	200,000	90,564	108,498
Hamilton, Grimsby and Beamsville	22·60	385,000	210,565	227,544
Hamilton Radial	22·86	271,150	198,395	223,806
Hamilton Street	17·40	1,525,000	984,347	870,869
Hull Electric Co	16·54	292,000	328,364	250,650
International Transit Co	3·80	222,500	87,239	71,317
Kingston, Portsmouth and Cataraqui	6·00	183,100	78,306	64,122
Kitchener and Waterloo Street[1]	4·30	124,341	103,522	79,062
Lake Erie and Northern	51·00	3,817,500	348,778	274,802
Lethbridge Municipal[1]	6·67	361,428	64,651	74,297
Levis County	11·50	922,900	131,254	113,587
London and Port Stanley (Lessor)	24·50	1,775,194	623,007	475,662
London and Port Stanley (Lessee)	–	1,131,000	–	–
London Street	27·48	1,123,480	567,749	487,344
Moncton Tramway Co	2·72	1,365,400[4]	13,547	13,729
Montreal Tramways	142·42	42,508,796	11,754,477	8,535,571
Montreal and Southern Counties	52·67	1,000,000	489,062	488,566
Moose Jaw	9·00	795,372	120,962	108,427
Nelson Municipal[1]	2·13	81,000	20,828	19,796
New Brunswick Power Co	14·30	5,219,000[4]	269,337	294,098
Niagara Falls Park and River Div. (Int'l Ry.)	11·91	630,000	218,434	182,091
Niagara, St. Catharines and Toronto[3]	61·60	2,023,000	1,070,354	969,763
Niagara, Welland and Lake Erie	1·87	282,000	25,450	26,176
Nipissing Central[2]	15·37	530,000	99,860	121,648
Nova Scotia Tramways and Power Co	12·63	7,838,800[4]	680,263	571,094
Oshawa	9·00	40,000	206,129	142,704
Ottawa	26·61	2,245,900	1,839,907	1,374,911
Peterborough Radial[2]	7·64	479,753	100,141	107,264
Pictou County Electric Co	9·20	1,130,000[4]	104,321	96,103
Port Arthur Civic[1]	12·43	729,738	195,749	153,694
Quebec Ry. Light and Power Co. (Citadel Div.)	19·26	5,775,670[4]	907,275	707,639
Quebec Ry. Light and Power Co. (Montmorency Div.)	28·60		335,647	284,945
Regina Municipal[1]	25·59	1,586,053	374,221	298,343
Sandwich, Windsor and Amherstburg[1]	34·76	1,086,000	506,349	424,893
Sarnia Street	8·25	184,700	84,496	91,982
Saskatoon Municipal[1]	12·63	851,036	288,382	231,382
Schomberg and Aurora[1]	14·44	550,000	32,793	28,756
Shawinigan Falls Terminal	3·75	493,800	58,906	47,311
Sherbrooke Ry. and Power Co	9·39	2,827,000[4]	97,256	105,062
St. Thomas Municipal[1]	7·50	141,907	31,931	53,971
Suburban Rapid Transit Co	17·26	600,000	197,846	185,280
Sudbury, Copper Cliff Suburban	7·90	288,100	52,194	42,347
Sydney and Glace Bay	–	868,000	–	–
Three Rivers Traction Co	7·10	835,700	137,273	106,443
Toronto Street	62·04	14,274,360	5,130,431	4,782,490
Toronto Suburban[3]	65·30	4,128,000	423,143	453,133
Toronto Civic	10·26	2,524,737	398,700	425,127
Toronto and York Radial[1]	70·45	2,000,000	1,104,470	881,224
Waterloo-Wellington Ry	3·45	79,200	10,660	8,213
Windsor, Essex and Lake Shore Rapid	36·17	1,750,000	322,240	253,953
Winnipeg, Selkirk and Lake Winnipeg	38·48	1,180,200	225,025	176,714
Winnipeg Street	63·71	23,380,000[4]	3,740,718	2,603,658
Woodstock, Thames Valley and Ingersoll	10·20	340,000	26,567	21,821
Yarmouth Light and Power Co	3·00	590,000[4]	58,917	26,723
Totals	**1,687·37**	**177,187,436**	**44,536,832**	**35,945,316**

[1]Municipally owned. [2]Provincially owned. [3]Owned by Canadian National Railways. [4]Representing all divisions of the Company.

25.—Mileage Operated, Capital, Earnings, Operating Expenses, Employees, and Salaries and Wages of Electric Railways in Canada, year ended Dec. 31, 1922.

Name of Railway.	Mileage Operated.	Capital Liability.	Earnings.	Operating Expenses.	Number of Employees.	Salaries and Wages.
	Miles	$	$	$	No.	$
Brandon Municipal[1]	7·65	450,000	41,421	51,253	20	24,093
Brantford and Hamilton	23·19	960,000	242,464	183,274	68	99,392
Brantford Municipal[1]	20·63	600,000	177,696	148,386	76	98,706
British Columbia	245·80	18,636,122	5,082,064	3,963,507	1,998	3,125,747
Calais Street	6·45	200,000	45,445	40,168	25	24,286
Calgary Municipal[1]	66·50	2,365,174	881,684	599,006	246	382,458
Canadian Resources Development Co.	1·75	14,843	31	981	1	300
Cape Breton Electric Co.	30·59	2,535,000[4]	296,812	293,546	137	182,152
Chatham, Wallaceburg and Lake Erie	36·73	1,455,100	146,650	144,446	43	64,272
Cornwall Street Ry. Light and Power Co.	4·00	265,000	65,939	42,178	27	40,178
Edmonton Radial[1]	33·32	3,194,636	795,633	543,598	213	355,788
Fort William Street[1]	11·03	1,337,000	187,742	162,073	58	74,092
Fort William Terminal Ry. and Bridge Co.	–	125,000	–	–	–	–
Grand River	24·36	551,000	377,914	321,354	172	226,225
Guelph Radial[1]	8·49	294,994	73,660	72,203	31	45,562
Hamilton and Dundas Street	6·98	200,000	74,936	96,269	38	51,611
Hamilton, Grimsby and Beamsville	22·60	385,000	202,371	211,461	76	112,386
Hamilton Radial	22·86	271,150	188,841	211,201	75	104,995
Hamilton Street	17·40	1,505,000	989,961	821,180	417	505,880
Hull Electric Co.	16·54	292,000	315,285	238,271	159	212,230
International Transit Co.	3·80	202,500	66,621	55,263	22	33,000
Kingston, Portsmouth and Cataraqui	6·00	183,100	71,060	69,723	35	42,224
Kitchener and Waterloo Street[1]	4·30	181,542	111,274	80,960	36	48,778
Lake Erie and Northern	51·00	3,817,500	340,895	281,864	148	172,110
Lethbridge Municipal[1]	6·67	350,815	57,784	62,802	20	35,685
Levis County	11·50	922,900	85,643	69,199	59	37,207
London and Port Stanley (Lessor)	–	1,775,194	–	–	–	–
London and Port Stanley (Lessee)	24·50	1,388,500	564,482	440,081	172	241,491
London Street	27·48	1,112,480	594,584	494,986	259	341,293
Moncton Tramways Co.	2·72	1,347,400[4]	14,554	16,862	6	5,460
Montreal Tramways	142·81	42,346,343	11,826,351	6,810,716	3,870	4,811,538
Montreal and Southern Counties	52·33	1,000,000	510,662	435,762	173	226,118
Moose Jaw	9·00	795,373	108,565	99,387	48	68,927
Nelson Municipal[1]	3·38	81,000	21,787	23,142	11	13,816
New Brunswick Power Co.	16·69	5,461,000[4]	416,448	323,376	121	141,736
Niagara Falls Park and River Div. (Int'l Ry.)	11·91	600,000	107,605	120,001	38	59,062
Niagara, St. Catharines and Toronto[3]	61·77	2,023,000	985,090	823,006	475	586,866
Niagara, Welland and Lake Erie	2·90	282,000	18,664	16,191	9	8,561
Nipissing Central[2]	15·37	159,000	90,348	85,543	32	43,219
Nova Scotia Tramways and Power Co.	12·63	8,338,800[4]	599,915	460,671	226	333,210
Oshawa	9·00	40,000	331,249	172,187	104	112,432
Ottawa	26·61	1,877,200	1,822,544	1,308,063	673	935,781
Peterborough Radial[2]	7·64	385,754	89,204	100,443	52	59,584
Pictou County Electric Co.	9·20	1,130,000[4]	76,053	75,177	40	53,604
Port Arthur Civic[1]	12·80	644,374	192,359	133,894	49	80,828
Quebec Ry. Light and Power Co. (Citadel Div.)	20·48	5,775,670[4]	892,138	712,488	396	498,496
Quebec Ry. Light and Power Co. (Montmorency Div.)	28·60		327,008	261,850	221	180,404
Regina Municipal[1]	25·59	1,586,971	362,728	277,908	93	162,169
Sandwich, Windsor and Amherstburg[1]	34·75	597,000	574,124	435,822	177	283,925
Sarnia Street	8·25	180,700	88,173	78,290	30	46,400
Saskatoon Municipal[1]	12·63	881,036	278,205	210,098	91	139,054
Schomberg and Aurora[1]	14·44	–	27,970	34,069	13	15,929
Shawinigan Falls Terminal	11·52	493,800	75,290	41,820	9	11,272
Sherbrooke Ry. and Power Co.	9·39	3,727,000[4]	91,376	93,691	73	56,760
St. Thomas Municipal[1]	6·50	137,623	29,364	37,721	9	22,832
Suburban Rapid Transit Co.	17·31	600,000	189,465	193,701	–	–
Sudbury-Copper Cliff Suburban	7·90	248,100	39,339	33,547	13	20,441
Sydney and Glace Bay	–	864,000	–	–	–	–
Three Rivers Traction Co.	7·10	835,700	126,918	84,012	58	50,033
Toronto Suburban[3]	65·51	4,128,000	345,244	331,097	208	275,465

[1]Municipally owned. [2]Provincially owned. [3]Owned by Canadian National Railways. [4]Representing all divisions of the Company

25.—Mileage Operated, Capital, Earnings, Operating Expenses, Employees, and Salaries and Wages of Electric Railways in Canada, year ended Dec. 31, 1922.—concluded.

Name of Railway.	Mileage Operated.	Capital Liability.	Earnings.	Operating Expenses.	Number of Employees.	Salaries and Wages.
	Miles.	$	$	$	No.	$
Toronto Transportation Commission[1]	93·48	26,334,180	11,580,071	8,375,733	4,140	6,291,128
Toronto and York Radial[1]	66·22	2,375,000	1,130,661	977,064	412	578,114
Waterloo-Wellington Ry	3·45	79,200	10,423	9,870	4	4,260
Windsor, Essex and Lake Shore Rapid	37·35	1,750,000	312,093	264,504	81	129,730
Winnipeg, Selkirk and Lake Winnipeg	38·48	1,222,200	213,741	169,193	45	79,187
Winnipeg Street	63·57	23,380,000[2]	3,588,980	2,615,488	1,435	1,877,865
Woodstock, Thames Valley and Ingersoll	10·20	340,000	22,532	19,456	13	11,718
Yarmouth Light and Power Co.	3·00	640,000[2]	64,357	25,797	20	20,112
Totals	**1,724·60**	**188,258,974**	**49,660,485**	**35,986,872**	**18,099**	**24,988,119**

[1] Municipally owned. [2] Representing all divisions of the company.

26.—Number of Passengers, Employees and others Killed and Injured on Electric Railways, years ended June 30, 1894-1919, and for calendar years 1919-1922.

Years.	Passengers.		Employees.		Others.		Totals.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
1894–1899	1	23	2	9	9	12	12	44
1900	–	6	–	–	2	7	2	13
1901	3	158	1	58	11	98	15	314
1902	9	410	1	33	22	120	32	563
1903	10	504	7	62	22	212	39	778
1904	10	508	3	64	40	272	53	844
1905	30	862	3	87	23	347	56	1,296
1906	11	1,085	2	127	34	441	47	1,653
1907	27	988	7	216	37	532	71	1,736
1908	18	1,156	6	188	43	539	67	1,883
1909	11	1,303	7	218	50	618	68	2,139
1910	14	1,595	13	227	68	716	95	2,538
1911	11	1,784	8	300	83	586	102	2,670
1912	16	1,950	8	442	86	736	110	3,128
1913	17	1,662	12	392	44	490	73	2,544
1914	9	1,757	13	469	42	581	64	2,807
1915	14	1,554	6	413	44	638	64	2,605
1916	18	1,905	4	305	28	819	50	3,029
1917	11	1,541	10	395	42	792	63	2,728
1918	9	1,451	12	383	56	762	77	2,596
1919	10	1,600	37	621	47	1,290	94	3,511
Totals to June 30, 1919	**259**	**23,802**	**162**	**5,009**	**833**	**10,608**	**1,254**	**39,419**
Years ended Dec. 31.								
1919	4	1,717	29	951	58	1,505	91	4,173
1920	9	1,968	7	658	75	1,434	91	4,060
1921	5	1,110	8	609	35	666	48	2,385
1922	6	2,260	10	873	31	700	47	3,833

IV.—EXPRESS COMPANIES.

"Express service is an expedited freight service on passenger trains." But express companies do not own the means of performing their services; they use railway facilities by virtue of contracts with the railway companies. Express companies in Canada have had close relations with the railways practically from the beginning.

The Vickers Express Company, at first, did business as a stage company in south-western Ontario. Later it conducted an express business on the Toronto, Grey and Bruce and on the Northern railways. When the Canadian Pacific railway acquired the Toronto, Grey and Bruce, the Vickers Express Company did business for a time in the same car with the Dominion Express Company, but soon went out of existence.

The Dominion Express Company had been incorporated in 1882, with a capital stock of $1,000,000. Between 1882 and 1904 the original shareholders assigned their stock to trustees, who thenceforth held it for the C.P.R. The transfer of the stock became evident in 1904, when at a special meeting the shareholders of the company increased its capital to $2,000,000,

In 1865 the Canadian Express Company was incorporated with a nominal capital of $500,000, of which $275,200 was subscribed. In 1891 the Grand Trunk Railway Company purchased the capital stock for $660,000, and thenceforth the stock of the company was held for the Grand Trunk by trustees, all of whom were directors of the railway.

The Canadian Northern Express Company was incorporated in 1902 with a nominal capital of $1,000,000, of which $300,000 was issued. Five thousand dollars was paid in cash and the remainder was issued as paid up stock. Mackenzie, Mann and Company, Limited, received all but five $100 shares, which went to qualify directors. The connection between the railway and the express company consisted in the two companies having practically the same directors.

Since the taking over of the C.N.R. and the G.T.R. by the Government, the express businesses of the two have been amalgamated to simplify matters. Beginning September 1, 1921, the operations of the Canadian Express Company and the Canadian National Express Company were consolidated under the name of the second, and the staffs of the two companies were rearranged, where necessary, to constitute the staff of the new company.

Before 1915, an express company in Canada was not liable for delay or damage caused by anything quite beyond its control, thus maintaining itself as an entity separate from the railway company. But in 1915 this liability was qualified, and thenceforth an express company became liable for delay or injury of goods if either were caused by the railway company in whose cars the goods were being carried.

Goods are sent by express for quick transit, so that express companies do not have to compete with freight rates by rail or water. Thus in its first tariff, the Dominion Express Company, in pursuance of its contract with the C.P.R., gave a rate of 2½ times the maximum first-class railway freight rate for the same goods carried the same distance. An express company usually pays the railway company a percentage of its gross earnings; for example, the Canadian Express Company paid the Grand Trunk 50 p.c. But the railway, by controlling the stock, has an additional revenue; and since express companies have little equipment but offices, and, therefore, have slight expenses for upkeep, the railway receives in the end practically all the profits of the express company above bare operating expenses. Express rates, like freight rates, are subject to the approval of the Board of Railway Commissioners.

Express Company Operations.—There were operating in Canada in 1922, the last year for which the statistics of the Transportation Branch of the Dominion Bureau of Statistics are available, four distinctly Canadian express companies, viz., the Canadian National Express Co., the Central Canada Express Co., the Dominion Express Co., and the British America Express Co. They are organized

under powers conferred by Acts of the Dominion Parliament, and their business consists in the forwarding of parcels through the railway companies, in the transfer of luggage and in the issue of money orders, travellers' cheques, letters of credit and other forms of financial paper. Three other express companies situated in the United States, but consolidated during the war period, like the United States railways, under the operation of a single management appointed by the United States Government, and referred to here as "American Railway," also do business in Canada. The total capital liability of the four Canadian companies on December 31, 1922, stood at $6,150,000.

A considerable volume of the business of express companies has, during recent years, been drawn off by the numerous motor bus and motor truck systems now in operation. Transport facilities offered by motor vehicles have proved to be of much value; with the building of improved road systems throughout the country, further decreases in the amount of express traffic now carried by the railways over short distances may be expected.

Table 27, following, shows the operating mileage of Canadian express companies for the years 1919-1922, illustrating chiefly the division of business between the various concerns and the provinces in which their systems are most highly developed. The first section of the table illustrates clearly the preponderance of mileage operated over steam railway lines.

27.—Operating Mileage of Express Companies in Canada, by Routes, by Provinces and by Companies, for the calendar years 1919-1922.

Routes, Provinces and Companies.	1919.	1920.	1921.	1922.
	Miles.	Miles.	Miles.	Miles.
By routes over—				
Steam roads	40,450	40,852	40,851	42,176
Electric lines	369	301	304	250
Steamboat lines (Inland)	2,912	2,862	2,862	3,037
Stage lines	57	84	81	81
Steamship lines (Ocean)	–	–	16,811	16,811
Miscellaneous[1]	16,813	16,813	2	2
Totals	**60,631**	**60,912**	**60,911**	**62,357**
By Provinces—				
Prince Edward Island	500	500	500	490
Nova Scotia	1,569	1,947	1,946	1,946
New Brunswick	2,519	2,549	2,549	2,810
Quebec	5,424	5,426	5,398	5,514
Ontario	11,908	11,701	11,701	11,701
Manitoba	4,402	4,296	4,298	4,298
Saskatchewan	6,148	6,168	6,219	6,269
Alberta	4,601	4,774	4,754	5,626
British Columbia	5,756	5,778	5,738	5,723
Yukon	669	637	669	844
Other	17,135	17,137	17,137	17,137
Totals	**60,631**	**60,912**	**60,911**	**62,357**
By companies—				
American Railway Express Co	2,822	2,657	2,611	2,786
British America Express Co	414	414	414	414
Canadian Express Co.[2]	14,963	15,308	15,308[3]	–
Canadian Northern Express Co.[2]	8,810	8,921	–	–
Central Canada Express Co	729	729	729	763
Dominion Express Co	32,893	32,884	32,806	33,666
Canadian National Express Co	–	–	9,043[4]	24,728
Totals	**60,631**	**60,912**	**60,911**	**62,357**

[1] Miscellaneous mileage is almost entirely on ocean steamship lines. [2] Now included in the Canadian National Express Co. [3] 8 months. [4] 4 months.

In Tables 28 and 29 are given statistics of the receipts and expenses of express companies for the year ended Dec. 31, 1922, with totals shown for preceding years back to 1915. Only the most important items are given. Table 30 illustrates the amount of business transacted by these companies in the sale of money orders, travellers' cheques, etc.—one of their most valuable services to the public.

A decrease in revenue of $3,807,561 will be noted in Table 28 when gross receipts from operation for 1922 are compared with those of the previous year. Payments for express privileges decreased with the revenues, and consequently net operating revenues showed an increase of $165,233.

28.—Earnings of Express Companies for the years ended June 30, 1915-1919, and for the calendar years 1919-1922.

Companies.	Revenue from transportation.	Money Orders, domestic.	Money Orders, foreign.	Travellers' Cheques, domestic.	Travellers' Cheques, foreign.
	$	$	$	$	$
American Railway Express	2,272,589	-	-	-	-
British America Express	30,913	-	-	-	-
Canadian National Express	12,370,277	85,510	-	1,572	-
Central Canada Express	107,420	-	-	-	-
Dominion Express	13,240,818	119,151	28,118	9,487	5,158
Total, 1922, Dec. 31	**28,022,017**	**204,661**	**28,118**	**11,059**	**5,158**
Total, 1921, Dec. 31	**31,767,788**	**241,346**	**41,914**	**16,639**	**5,207**
Total, 1920, Dec. 31	**29,806,284**	**311,031**	**33,093**	**12,996**	**5,355**
Total, 1919, Dec. 31	**24,361,681**	**233,502**	**1,089**	**5,162**	**1,076**
Total, 1919, June 30	**20,651,772**	**215,427**	**1,237**	**1,617**	**3,023**
Total, 1918, June 30	**18,116,383**	**267,154**	**19,790**	**1,698**	**4,311**
Total, 1917, June 30	**16,353,461**	**239,754**	**20,727**	**4,171**	**2,269**
Total, 1916, June 30	**12,428,645**	**202,458**	**23,670**	**4,515**	**429**
Total, 1915, June 30	**10,917,619**	**186,580**	**15,239**	**3,429**	**1,704**

Companies.	"C.O.D." Cheques.	Gross Receipts from Operation.[1]	Net Operating Revenue.	Gross Corporate Income.	Net earnings.
	$	$	$	$	$
American Railway Express	-	2,364,796	63,652	43,494	63,652
British America Express	-	30,913	4,058	3,906	4,058
Canadian National Express	147,613	12,618,671	470,540	388,253	470,540
Central Canada Express	-	107,420	18,965	15,791	18,965
Dominion Express	131,220	13,575,533	−38,190	7,123	−2,034
Total, 1922, Dec. 31	**278,833**	**28,697,333**	**519,025**	**458,568**	**555,181**
Total, 1921, Dec. 31	**286,015**	**32,504,894**	**353,792**	**342,652**	**414,471**
Total, 1920, Dec. 31	**222,521**	**30,512,504**	**−1,617,836**	**−1,457,806**	**−1,794,961**
Total, 1919, Dec. 31	**182,473**	**24,933,219**	**−1,123,048**	**-**	**−974,281**
Total, 1919, June 30	**163,837**	**21,157,930**	**−1,982,337**	**−1,777,354**	**−1,752,446**
Total, 1918, June 30	**157,933**	**18,680,092**	**450,244**	**-**	**303,736**
Total, 1917, June 30	**133,813**	**16,836,374**	**1,096,111**	**-**	**825,725**
Total, 1916, June 30	**116,780**	**12,860,629**	**919,713**	**1,007,935**	**787,692**
Total, 1915, June 30	**110,829**	**11,311,797**	**68,669**	**77,232**	**−27,405**

NOTE.—"American Railway Express" includes the American Express Co., Great Northern Express Co., Wells, Fargo & Co., consolidated during the war under the operation of the United States Government.

[1]Includes miscellaneous receipts.

29.—Operating Expenses of Express Companies for the years ended June 30, 1915-1919, and for the calendar years 1919-1922.

Companies.	Maintenance.	Traffic expenses.	Transportation expenses.	General expenses.	Total operating expenses.	Total privileges.	Taxes.
	$	$	$	$	$	$	$
American Railway Express	30,745	1,966	505,047	81,420	619,178	1,681,966	24,593
British America Express	–	1,079	6,557	3,763	11,399	15,456	201
Canadian National Express	261,329	43,098	5,535,889	332,834	6,173,149	5,974,982	109,411
Central Canada Express	76	821	31,130	2,576	34,603	53,852	3,227
Dominion Express	236,656	107,765	5,899,513	514,256	6,758,190	6,855,533	103,668
Total, 1922, Dec. 31	**528,805**	**154,730**	**11,978,136**	**934,848**	**13,596,518**	**14,581,789**	**241,101**
Total, 1921, Dec. 31	**590,985**	**163,289**	**13,791,686**	**1,055,229**	**15,601,187**	**16,549,915**	**207,558**
Total, 1920, Dec. 31	**572,700**	**113,838**	**14,483,856**	**950,487**	**16,120,880**	**16,009,460**	**177,125**
Total, 1919, Dec. 31	**502,452**	**152,003**	**11,758,203**	**814,994**	**13,227,652**	**12,936,615**	**166,535**
Total, 1919, June 30	**393,871**	**92,972**	**10,566,603**	**739,053**	**11,792,499**	**11,347,767**	**155,251**
Total, 1918, June 30	**341,845**	**94,008**	**8,267,730**	**642,083**	**9,354,666**	**8,875,181**	**146,505**
Total, 1917, June 30	**269,576**	**78,219**	**6,519,790**	**829,071**	**7,687,656**	**8,052,606**	**270,387**
Total, 1916, June 30	**194,726**	**73,962**	**5,041,155**	**484,674**	**5,794,517**	**6,146,399**	**146,294**
Total, 1915, June 30	**107,618**	**99,693**	**4,981,846**	**452,747**	**5,632,904**	**5,610,224**	**123,029**

30.—Business transacted by Express Companies in financial paper for the calendar years 1919-1922.

Description.	1919.	1920.	1921.	1922.
	$	$	$	$
Money Orders, domestic	52,460,478	65,289,817	47,288,611	50,217,071
Money Orders, foreign	2,222,908	2,315,114	1,494,844	1,467,039
Travellers' cheques, domestic	837,093	513,242	549,846	906,928
Travellers' cheques, foreign	267,320	226,940	224,160	311,110
"C.O.D." cheques	18,062,985	22,413,731	20,600,083	18,308,877
Telegraphic transfers	208,333	162,193	226,622	110,620
Other forms	2,639,576	1,668,138	619,288	486,547
Total	**76,698,693**	**92,589,175**	**71,003,454**	**71,808,192**

V.—ROADS AND HIGHWAYS.

Historical.—The early roads were auxiliary to water routes as avenues of transportation. Their use became common during the summer seasons when portages were necessary to avoid obstacles to river and lake travel, and during the winters, when ice prevented navigation and snow covered the inequalities of the ground. Even the extensive system of waterways of eastern Canada was an inadequate means of communication between points of settlement in a rapidly growing colony, and the need for overland routes manifested itself in the introduction of the system of common roads which prevailed under the feudal *régime*; and not only did the crude early roads serve the needs of the settlers but also those of the British, French and American armies during their numerous campaigns. Regiments were frequently employed, during times of peace, in road construction in different parts of Upper and Lower Canada.

The first important highway in Canada extended along the north shore of the St. Lawrence from Quebec to Montreal, being gradually completed with the growth of the French settlement. In Upper Canada, one of the earliest roads was that from Toronto to lake Simcoe (Yonge St.), completed in 1794 under the direction of Gov. Simcoe, the work being done by the Queen's Rangers. This road not only gave access to the area north of Toronto, but also provided a more convenient route than that of the Ottawa river from the trading posts on the Upper Lakes

to the centres of population along the St. Lawrence. Montreal was joined to Kingston by road in 1816 and in the following year to Toronto. Thereafter other highways from points served by water routes to inland settlements began to increase in number, as it became apparent that they were essential to the commercial life of the country as a means of transporting supplies to the settlers, and of bringing their products to the central markets of the colony. The system of posts which had been established about the beginning of the nineteenth century necessitated passable routes between the various offices, and by 1827 a through road was available between Halifax and Amherstburg, comprising for the most part, the old Kempt Road, the York Road, Dundas Street and the Baldoon Road. From this trunk line of communication branch roads extended north and south to the more important centres of population in the two Canadas.

The cost of construction of these roads was high, and travel by stage coach was tedious and costly. As late as 1850, some points in central Ontario were still inaccessible to any vehicle. Later years, however, have brought with them improved methods of construction and a resulting reduction in expenses, together with an improvement in the wearing qualities of the more important highways. The growth of motor traffic has played a conspicuous part in the movement towards increased and improved road construction. In the older provinces of the east it has been a question of improving the existing roads and of building highways for the use of through traffic between the larger cities, while in the western provinces it has been more a matter of replacing the prairie and mountain trails with roads fit for modern tourist and freight traffic.

A table of road mileage in Canada is included. When it is considered that throughout the Dominion there are but 20 persons to every mile of road and that on an average there is one mile of road for every 5 square miles of land, the magnitude of the problem faced in the construction of these traffic routes is illustrated. A small population scattered over a large area has made this, like other transportation problems, particularly difficult of solution.

31.—Classification of Canadian Highway and Road Mileages, as at October 31, 1922.

Provinces.	Unimproved Earth.	Improved Earth.	Gravel.	Water-bound Macadam.	Bituminous Macadam.	Bituminous Concrete.	Cement Concrete.	Totals.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
Prince Edward Island	3,468	170	2	7	–	–	–	3,647
Nova Scotia	11,580	2,453	1,096	53	8	–	–	15,190
New Brunswick	8,900	1,655	3,558	–	11	–	–	14,124
Quebec	29,676	11,324	2,344	1,838	97	11	64	45,354
Ontario	18,700	11,800	22,127	11,055	405	43	118	64,248
Manitoba[1]	44,375	24,000	1,600	–	–	25	–	70,000
Saskatchewan[2]	125,000	10,000	10	–	–	–	–	135,010
Alberta	15,193	44,207	–	–	–	–	–	59,400
British Columbia	1,055	10,691	4,101	45	27	29	21	15,969
Total	**257,947**	**116,300**	**34,838**	**12,998**	**548**	**108**	**203**	**422,942**

[1]Approximately 15 p.c. of surveyed road allowances giving some service.
[2]There are 210,000 miles of road allowances in the province.

Good Roads Movements.—The building of new roads and the improvement of those already in use, is a matter of such general interest that various organizations have been developed throughout the country for the purpose of advising and assisting the various governments in the work. Good roads associations, for the distribution of propaganda and the education of the public in the needs of improved highway routes, are to be found in most of the provinces, assisted by the various automobile and motor clubs. A branch of the Department of Railways and Canals directs its efforts solely to the study of highway development and construction, of the relations between the Dominion Government and the provincial Highway Departments, and of the financial assistance given to the provinces for road building.

The Canada Highways Act.—By c. 54 of the Statutes of 1919, the Dominion Parliament authorized the expenditure of $20,000,000 for the purpose of constructing and improving the highways of Canada during the five years succeeding the passage of the Act. In its apportionment, grants of $80,000 are made to every province during each of the five years, the remainder being allotted in proportion to their respective populations. Details as to cost, time, methods of construction, etc., of all roads built under the scheme are to be arranged between the Minister of Railways and Canals and the various provincial Government Departments. It need scarcely be added that the co-operation and encouragement of the Dominion Government has done much to assist the building of good roads throughout the country. Table 32 illustrates the working of the Act, showing the number and extent of projected roads and some of the more important items in the expenditure entailed.

32.—Statement of Progress of the Provinces under the Canada Highways Act, 1919, to March 31, 1922.

Provinces.	Projects under Agreement.					Federal Aid.	
	Number of Projects.	Number of Agreements.	Projected Mileage.	Estimated Subsidizable Cost.	Estimated Federal Aid (40%).	Provincial Allocation under the Act.	Total Payments.
	No.	No.	Miles	$	$	$	$
Prince Edward Island	20	20	181	324,565	129,826	603,455	143,759
Nova Scotia	24	24	207	2,251,259	900,504	1,468,720	486,412
New Brunswick	19	19	1,237	2,950,600	1,180,240	1,163,845	438,304
Quebec	14	35	238	2,638,642	1,055,457	4,748,420	540,218
Ontario	24	24	607	11,292,799	4,517,119	5,877,275	1,326,329
Manitoba	9	9	765	3,478,902	1,391,561	1,602,265	351,741
Saskatchewan	24	27	1,230	1,667,090	666,836	1,806,255	193,773
Alberta	–	–	–	–	–	1,477,810	–
British Columbia	13	20	355	2,938,599	1,175,439	1,251,955	453,473
Total	**147**	**178**	**4,820**	**27,542,456**	**11,016,982**	**20,000,000**	**3,934,009**

VI.—MOTOR VEHICLES.

The earliest motor vehicles were propelled by steam, the history of the gasolene motor car commencing with the construction of a successful gasolene engine by Daimler in 1884. Until 1900 France remained the headquarters of the industry, possessing in the latter year more than half of the 10,000 cars in operation in Europe, while in the United States the number of cars was only about 700. Shortly afterwards, the invention of the Ford car resulted in a keen competition to bring motor cars within the reach of the average man, profits being secured from large production

rather than high prices. Detroit became the centre of the automobile industry of the United States and the Canadian side of the Detroit river became the headquarters of the Canadian industry. As a consequence the population of such border towns as Windsor, Walkerville, and Sandwich has greatly increased in the past decade, while Ford City, which had no existence in 1911, had 5,870 inhabitants in 1921. Problems of regional location have resulted during more recent years in a gradual shifting of the centre of gravity of the industry, and the Toronto district now rivals in importance the longer established centre on the Detroit river.

Like many other inventions, the motor car commenced as a toy, then as the luxury of the rich, while now it ranks as a comfort of those in moderate circumstances and it may even become a necessity of life to the masses. Of late years it has been increasingly used for economic purposes; to-day the great majority of cars effect substantial economies in time or in money for their owners, partly or wholly offsetting their cost of upkeep. In the past few years, the motor truck—the freight automobile—has assumed considerable economic importance, and this year it is separately classified in Table **34** of this section. There seems to be but little doubt that in Canada, as was the case in England and the New England states, only the lack of adequate road systems is postponing a great increase in motor bus traffic for both passenger and fast freight service.

In a recent government report the statement is made that "the automotive transport industry is just beginning to be a factor in the transportation of passengers and freight in this country. Railways have found that the handling of less than car-load lots of freight is often unprofitable business; it follows that commercial trucks are being used in greater numbers to carry lighter shipments of property between some of the larger centres served by adequately surfaced highways." While the increased passenger and freight rates are probably the main cause of the comparatively slow increase in recent years in railway traffic (see Table **6** of this section), there can be no doubt that motor vehicles are now serving much of the short haul traffic formerly served by steam and electric railways. In addition, a certain amount of traffic formerly carried over water routes has been diverted to these more modern carriers.

Registration.—The increase of the use of motor vehicles in Canada has been very rapid. In 1904 the number of motor vehicles registered in Ontario was only 535. In 1907, 2,130 motor vehicles were registered in six provinces, and in 1908, 3,033 in eight provinces, the motor car being at that time prohibited in Prince Edward Island. From these small beginnings Table **33** shows an increase to 513,821 motor vehicles in 1922, an increase over 1921 of 48,443, or almost the total number of motor vehicles registered in 1913. In Table **34** are given the numbers registered by provinces in 1921, classified as passenger cars, commercial cars or trucks, and motor cycles.

By far the greatest increase during the past year has been in Ontario, where the number of cars registered in 1922 is shown as 240,933 in comparison with 206,521 in the previous year. The percentage increase in this province is thus 14·3 as compared with a figure of 9·4 for the whole of Canada, the actual number, 34,412, constituting the greater part of the total increase for the Dominion, which amounted to 48,443.

According to statistics collected for 1922 by the National Automobile Chamber of Commerce of the United States, Canada in that year ranked next to the United States among the countries of the world in the number of its registered motor vehicles. The total shown (513,821) is some 15,500 greater than that of the United Kingdom,

where total registration for 1922 is set at 498,271. Registrations in United States during the past year were 12,239,114; in France, the fourth largest user of motor vehicles, 295,876; in Germany, 128,092; in Australia, 82,417; in Argentina, 78,413; and in Italy, 53,600.

In 1922, there was, in Canada, one motor vehicle for every 17·45 of its population, or one for every 3·876 families. In respect to motor vehicles per population, when compared with the more important foreign countries, Canada ranks second to the United States where, in 1922, there was a motor vehicle registered for every 9 of the population of the country. A comparison of the various provinces in the same respect shows one motor vehicle to every 40·8 persons in Prince Edward Island in 1922, to every 32·7 in Nova Scotia, 28·5 in New Brunswick, 38·7 in Quebec, 12·4 in Ontario, 14·8 in Manitoba, 12·8 in Saskatchewan, 15·0 in Alberta, 15·6 in British Columbia and 43·4 in the Yukon Territory.

Table 33 shows the registration of motor vehicles in Canada by provinces for the years 1907 to 1922.

33.—Number of Motor Vehicles registered in Canada, by Provinces, 1907-1922.

Years.	P.E. Island.	Nova Scotia.	New Brunswick.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.	Canada.
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1907	–	62	–	254	1,530	–	54	55	175	2,130
1908	–	65	104	296	1,754	412	74	65	263	3,033
1909	–	69	167	485	2,452	662	149	275	504	4,763
1910	–	148	299	786	4,230	1,524	531	423	1,026	8,967
1911	–	228	483	1,878	11,339	2,436	1,304	1,631	2,220	21,519
1912	–	456	700	3,535	16,266	4,099	2,286	2,505	4,289	34,136
1913	26	511	824	5,452	23,700	5,475	4,659	3,773	6,138	50,558
1914	31	1,324	1,328	7,413	31,724	7,359	8,020	4,728	7,628	69,598
1915	34	1,841	1,900	10,112	42,346	9,225	10,225	5,832	8,360	89,944
1916	50	3,012	2,965	15,335	54,375	12,765	15,900	9,516	9,457	123,464
1917	303	5,350	5,251	21,213	83,308	17,507	32,505	20,624	11,645	197,799
1918	639	8,100	6,434	26,897	114,376	24,012	50,531	29,300	15,370	275,746
1919	967	10,210	8,306	33,547	144,804	30,118	56,855	34,000	22,420	341,316
1920	1,419	12,450	11,196	41,562	177,561	36,455	60,325	38,015	28,000	407,064
1921	1,751	14,205	13,615	54,670	206,521	40,215	61,184	40,235	32,900	465,378
1922	2,167	16,159	13,746	61,995	240,933	42,200	61,367	40,642	34,526	513,821

NOTE.—The number of motor vehicles in the Yukon (never more than 100) is included in the totals for Canada, 1914-22.

In Table 34 the registration of motor vehicles in 1922 is given according to the general type or purpose of the cars in use in each of the provinces.

34.—Types of Motor Cars registered in Canada, by Provinces, 1922.

Provinces.	Passenger Cars.	Commercial Cars or Trucks.	Motor Cycles.	Dealer's Cars.	Total.
	No.	No.	No.	No.	No.
Prince Edward Island	2,059	87	8	13	2,167
Nova Scotia	14,177	1,707	145	130	16,159
New Brunswick	12,609	904	98	135	13,746
Quebec	52,052	6,877	1,886	1,180	61,995
Ontario	210,333	24,164	4,799	1,637	240,933
Manitoba	38,913	2,102	855	330	42,200
Saskatchewan	60,352	[1]	296	719	61,367
Alberta	38,214	1,749	403	276	40,642
British Columbia	33,505	[1]	880	141	34,526
Yukon	61	20	5	–	86
Total	**462,275**	**37,610**[2]	**9,375**	**4,561**	**513,821**

[1] Included with passenger cars. [2] Exclusive of British Columbia and Saskatchewan.

Government Revenue.—The taxation of motor vehicles, garages, chauffeurs, etc., is becoming a lucrative source of government income. In every province the operation of automobiles and motor cycles is dependent on their carrying a license duly issued by the various authorities, while similar licenses permit the maintenance of garages and the driving of cars or trucks by hired chauffeurs. The accompanying table (35) shows the government revenue by provinces for the calendar year 1922, illustrating, at the same time, the more important sources from which it is derived.

35.—Revenues from the Taxation of the Sale, Distribution and Operation of Motor Vehicles, by Provinces, for the calendar year 1922.

Provinces.	Passenger Cars.	Trucks.	Motor Cycles.	Dealers' Cars.	Garages.	Operators and Chauffeurs.	Fines.	Miscellaneous.	Total.
	$	$	$	$	$	$	$	$	$
Prince Edward Island	43,366	1,670	77	480	–	785	–	264	46,801
Nova Scotia	364,993	44,363	1,294	7,571	–	7,827	577	–	426,625
New Brunswick	268,982	24,152	564	3,236	346	2,804	2,239	–	302,323
Quebec	1,168,806	271,675	9,785	20,715	8,388	333,708	91,280	75,113	1,979,470
Ontario	2,888,123	468,800	14,033	33,719	18,687	30,129	–	23,939	3,477,430
Manitoba	484,370	[2]	2,464	12,403	–	26,564	–	2,392	528,193
Saskatchewan	811,321	[2]	1,368	15,148	333	3,490	–	14,696	846,356
Alberta	695,632	–	1,902	8,041	–	5,735	–	334	716,873
British Columbia	–	–	–	–	–	–	–	–	897,075[3]
Yukon	–	–	–	–	–	–	–	–	911[3]
Total	**6,725,593**	**810,660**	**31,487**	**101,313**	**27,754**	**411,042**	**94,096**	**116,738**	**9,222,057**[1]

[1] Total includes $159 and $5,229 collected for transfers of cars in P. E. Island and Alberta respectively.
[2] Included in revenue from passenger cars.
[3] Details not available.

Motor Vehicle Acts and Regulations in Force.

The following is a brief synopsis of the laws and regulations in force in each province.

Prince Edward Island.—Under the Motor Vehicles Act, 1922, and regulations, all cars must be registered in the office of the Provincial Secretary. In addition to a registration fee of five dollars, and a marker fee of one dollar, an annual tax of 80 cents per 100 pounds weight is payable on the 1st of May, but this is not required of non-residents unless the car is used in the province during more than eight weeks in one year. Chauffeurs must be 18 years of age, all other drivers of cars, owners included, must be 17 years old and must be licensed. Every car must have a lock, or other device, to prevent it from being operated when left unattended. The speed limits are, in cities, towns and villages 12 miles an hour, on approaches to steep descents, bridges, or highway crossings, 10 miles an hour, on roads outside cities or incorporated towns on which the driver has not a clear

view for at least one hundred yards free from turns and intersections, 15 miles an hour, and in all other places 25 miles an hour. The number of cars registered in 1922 (up to December 31), not including dealers' registration, was 2,154. Prince Edward Island is now the only province where vehicles keep to the left side of the road.

Nova Scotia.—The Motor Vehicle Act, 1918, requires cars to be registered by the Provincial Secretary, who issues permits renewable annually on January 1. Cars belonging to persons residing out of Nova Scotia need not be registered if cars are registered in the place where owners reside, and are used as passenger cars. This privilege is given for a period of not more than three months in each year. If owners come into the province to reside permanently or to carry on business they must register. No person under 16 years may operate a motor vehicle, and paid chauffeurs must be at least 18 and must take out licenses. Cars must have devices which will prevent their operation when left unattended and must also have mufflers. The speed limits are, in cities, towns and villages and in places where there is no clear view of the road for at least 50 yards, 15 miles an hour, at cross-roads and bridges, 15 miles, and in other places 25 miles an hour. During 1922 the total number of permits issued for cars was 16,159, including 145 motor cycles. The rule of the road in Nova Scotia was on April 15, 1923, changed from "keep to the left" to "keep to the right."

New Brunswick.—Under the Motor Vehicle Law, 1915, as amended May, 1917, the registering and licensing authority is the Department of Public Works. Cars must be registered when new and besides the registration fee, an annual fee is payable on January 1. Non-residents may operate cars registered in another province or state during not more than 30 days in any year without registration in New Brunswick. The driver of a car must be 18 years old, and must be the owner or a member of his household, a licensed chauffeur or a person accompanied by a chauffeur; all chauffeurs must take out licenses and must pass a qualifying examination before issue of the license. The speed limits are, in cities, towns and villages 12 miles an hour, in places which are closely built up, 15 miles an hour, and in other places where the road cannot be seen clearly for 200 yards, 20 miles an hour. All vehicles keep to the right since Nov. 30, 1922.

Quebec.—The law as to motor vehicles is contained in the Revised Statutes, 1909, chapter 4, s. 21, and amending Acts. Cars must be registered in the office of the Provincial Treasurer and re-registered annually on March 1. Save in the cases of taxi-cabs and auto-busses or similar vehicles which run daily or periodically between the province and neighbouring provinces or states, no registration in the province is required of cars registered outside the province, provided that similar exemption is granted by law of the state or province in which the tourist resides. All drivers of cars must be licensed, and must not be less than 18 years old. Cars, when left unattended, must be locked in such a way as to prevent their use, and all cars must have mufflers. The speed limits are, in cities, towns and villages, 20 miles an hour, on highways where the land is closely built up, 20 miles an hour, at bridges and cross-roads and within a distance of five hundred feet before reaching a railroad crossing, 8 miles an hour, and in open country 30 miles an hour. Motors must stop for street cars which are standing to take on or discharge passengers, and must reduce the speed to 16 miles an hour when meeting another vehicle. These rates have reference to pleasure cars only. In the case of a commercial vehicle having non-pneumatic tires, a speed of 8 miles an hour when loaded and 10

miles an hour when unloaded is allowed. When equipped with pneumatic tires the corresponding rates are 12 and 15 miles an hour.

Ontario.—The Acts concerning motor vehicles are the Motor Vehicles Act, R.S.O., 1914, c. 207, the Highway Travel Act, R.S.O., 1914, c. 206, the Load of Vehicles Act, 6 Geo. V, c. 49, the Public Vehicles Act, 10 Geo. V, c. 76 and amending Acts. These Acts were revised and compiled in 1923 as The Highway Traffic Act (13 Geo. V, c. 48), the provisions of which have effect from Jan. 1, 1924. The registering authority is the Department of Public Highways, which issues permits that remain in force for the calendar year. Cars may be used without registration for not more than three months in one year if registered in some other province, and for 30 days in one year if registered in certain of the United States which have entered into agreement with the province of Ontario. No person under 16 years may drive a car, and those between the ages of 16 and 18, as well as all paid chauffeurs, must be licensed. Cars must be equipped with mufflers. The speed limit in cities, towns, and villages is 20 miles an hour, in other places, 25 miles an hour, at road intersections, where vision is obscured, one-half of these rates of speed. A motor may not pass a street car which has stopped for passengers to get on or off. At street intersections a vehicle approaching from the right has the right-of-way. All cars are required to be equipped with non-glaring headlights.

Manitoba.—Under the Motor Vehicle Act, cars must be registered in the office of the Municipal Commissioner, and the registration is renewable annually on January 1. Chauffeurs must not be under 18 years old, and must have licenses; other drivers must not be under 16 years of age. Cars must have mufflers and devices to prevent their use when left unattended. Motors must stop when behind standing street cars. The provisions of the Act relative to registration and display of registration numbers do not apply to a motor vehicle owned by a non-resident of the province, other than a foreign person, firm or corporation doing business in the province, provided that the owner thereof shall have complied with the provisions of the law of the province, foreign country, state or territory of his residence relative to registration of motor vehicles and the display of his registration number thereon, and shall conspicuously display his registration numbers as required thereby. These provisions, however, shall be operative as to a motor vehicle owned by a non-resident of Manitoba only to the extent that under the laws of the province, foreign country, state or territory of his residence like exemptions and privileges are granted to motor vehicles duly registered under the laws of and owned by residents of Manitoba. No person shall operate a vehicle at a rate which is unreasonable, having regard to the traffic on the highway, and in case of prosecution for such an offence the onus of proving his innocence shall be upon the person accused.

Saskatchewan.—The licensing authority under the Vehicles Act is the Provincial Secretary. Licenses expire annually on December 31. Every motor vehicle, except motor cycles, must expose two number plates: one on the front and one on the rear. Motor vehicles must carry lights at night, and the front lights must be dimmed to prevent glare. Motor liverymen must be licensed. Non-residents may use cars for 30 days under permit from the Provincial Secretary without registration in the province. No person under the age of 16 may drive a car, and paid chauffeurs must take out licenses. A chauffeur's license may be granted to applicants over 16 and under 18 on passing special examination test. Cars must have mufflers. Cities, towns and villages have authority to regulate the speed limit within their respective boundaries. There are no speed limits in rural districts,

but special precautions are prescribed against accidents. Motor vehicles must stop for street cars which are taking on or discharging passengers.

Alberta.—The law relating to motor vehicles is contained in the Motor Vehicle Act, 1911, and amending Acts, and the Highways Act, 1911. Cars must be registered, with descriptions, in the office of the Provincial Secretary, who issues certificates, which are renewable annually on January 1. Paid chauffeurs must be licensees, and all drivers must not be under 16 years old, if male, or 18 years if female. Cars must be equipped with mufflers. The speed limits are 20 miles an hour in cities, towns and villages, and 10 miles an hour at street crossings and bridges, while there is special provision for speed of fire vehicles going to fires. A motor car may not pass a street car which has stopped for passengers to get on or off. Regulations may be made by the Lieutenant-Governor in Council providing for permits to a resident of the United States or of any province in Canada, who has complied with the provisions of the law regarding registration of his motor vehicle in the state or province in which he resides, to operate an unregistered car in Alberta. Such exemption or privilege applies to such persons only to the extent to which, under the laws of the said state or province, similar exemptions or privileges are granted with respect to motor vehicles registered under the laws of and owned by residents of Alberta. The same applies to driver's licenses. The Provincial Secretary may revoke or suspend the license of any chauffeur convicted under the provisions of the Liquor Act of selling or having for sale intoxicating liquor. Provision is made for the impounding of cars by the authorities where the owners or drivers are convicted of driving cars while intoxicated, or convicted under other sections of the Act relating to speeding and juvenile driving. There is provision against the carrying of loaded weapons in an automobile—a preventive measure against accidents during hunting trips.

British Columbia.—Under the Motor Vehicle Act, and amending Acts, cars are required to be registered with the Superintendent of Provincial Police. Licenses expire on December 31. Foreign registered cars may be used for touring in the province under a touring license issued by the Superintendent of Provincial Police. Cars registered outside the province may be used for 90 days free. No person under the age of 17 may drive a car, and paid chauffeurs must take out licenses. The speed limits are: in cities, towns and villages, 15 miles an hour, in wooded country 15 miles, and in open country 30 miles an hour. A motor may not pass a standing street car at more than 5 miles an hour and must stop if it overtakes the car while taking on or discharging passengers.

Yukon Territory.—The Motor Vehicle Ordinance, No. 14, 1914, requires all cars to be registered in the office of the Territorial Secretary, who issues certificates, renewable annually on July 15. A non-resident may operate an unregistered motor for not more than 90 days. No male under 16, and no female under 18 years of age may drive a motor. In cities, towns and villages the speed limit is 15 miles an hour, or 10 miles an hour at street intersections.

Imports and Exports of Motor Vehicles.

Table **36** is added to show the growth of import and export trade in motor vehicles, as affecting their use as carriers throughout the Dominion. While for the first ten years for which figures are shown, passenger and freight automobiles are classed together, it is only during recent years that trucks have been used to a large extent. A remarkable growth is shown both in the number of cars imported and of those exported from the country.

36.—Canadian Imports and Exports of Motor Vehicles, fiscal years ended Mar. 31, 1907-1923.

Fiscal Years.	Total Imports.				Total Exports (including re-exports).			
	Passenger.		Freight.[2]		Passenger.		Freight.[3]	
	No.	$	No.	$	No.	$	No.	$
1907[1]	350	531,028	–	–	126	168,142	–	–
1908	674	912,371	–	–	205	320,708	–	–
1909	533	585,097	–	–	279	450,127	–	–
1910	1,424	1,732,215	–	–	448	627,469	–	–
1911	3,488	4,235,196	–	–	787	892,212	–	–
1912	6,022	6,511,115	–	–	2,156	2,039,993	–	–
1913	8,377	9,738,839	–	–	4,091	2,952,988	–	–
1914	6,288	7,213,375	–	–	6,691	4,321,369	–	–
1915	5,476	4,888,704	–	–	5,579	3,290,234	–	–
1916	8,055	5,089,329	–	–	17,493	9,223,813	–	–
1917	12,037	7,981,177	327	423,824	10,331	5,637,465	–	–
1918	16,118	11,317,245	964	1,275,179	8,829	4,471,521	–	–
1919	6,473	5,326,510	1,744	2,274,748	11,867	6,328,447	2,584	1,347,521
1920	10,805	11,204,461	2,274	3,831,084	20,883	13,589,423	4,166	2,319,629
1921	5,907	8,399,537	1,706	3,578,938	15,870	11,867,425	4,341	2,733,775
1922	7,181	9,501,362	806	1,537,765	13,676	7,879,845	1,314	673,038
1923	11,402	11,857,165	1,082	1,889,105	45,372	25,987,515	3,726	1,456,795

[1] Nine months.
[2] Freight automobiles were classified with passenger automobiles in figures of imports until 1917.
[3] Freight automobiles were classified with passenger automooiles in figures of exports until 1919.

VII.—AIR NAVIGATION.

It was only in 1909 that Blériot made the first flight across the English channel, his venture marking the successful culmination of the many previous years of experiment with aircraft. In the five years that intervened before the war, progress was slow, increasing greatly, however, with the exigencies of the belligerents in the European conflict. Post-war years are witnessing, in Canada, serious and successful attempts to adapt the experience of war years to commercial purposes.

A result of the impetus given to air navigation by military operations has been, in Canada as in other countries, that the control of its development has rested largely in the hands of military authorities, and at the present time all aerial traffic, if not directly under the supervision of the Department of National Defence, is at least carried on with its sanction. This latter takes the form of licenses and permits granted to duly tested machines and qualified personnel.

Aeronautics in the Dominion has now three distinct phases,—(1) commercial flying, (2) flying for the civil service of the government, (3) military operations; while the two latter are unquestionably of great importance in the development of the technique of flying, still the former seems the direction in which the most notable advances will be made.

The report of the Air Board for the calendar year 1922 shows a total of 24 companies operating aircraft or using them as auxiliaries in the conduct of their business. The greatest use made of machines as commercial carriers has been in co-operation with the Forestry Departments of the Provincial Governments for patrol and survey purposes. Their value also as mail carriers on the Pacific coast and as a means of transport to pulp and paper companies in their forest operations has become established.

Brief tables compiled from the reports of the Air Board for the years 1921 and 1922 are appended. While statistics are not given in them under provincial classifications, it may suffice to state that the greatest amount of flying is done in Ontario, Quebec and British Columbia, these three provinces providing the most extensive fields for forest survey and fire patrol work. A smaller amount has been done in

the three prairie provinces. No flights were recorded during the year 1922 in Prince Edward Island, Nova Scotia or New Brunswick. Statistics of operations of the Canadian Air Force are not available. Expenditure by the Dominion government on aviation for the fiscal year 1922-23 was set by the estimates at $1,000,000. This includes amounts apportioned to the three branches set out above. Additional sums totalling $64,467 were voted by the provincial governments of Ontario, Quebec and British Columbia, to defray expenses of air operations undertaken.

37.—Summary Statistics of Civil Aviation in Canada, calendar years 1921 and 1922.

Items.	1921.			1922.		
	Commercial.	Civil government.	Total.	Commercial.	Civil government.	Total.
Firms selling aircraft	1	–	1	1	–	1
Firms operating aircraft	29	–	29	24	–	24
Licensed airplanes	58	11	69	46	6	52
Licensed seaplanes	15	25	40	13	23	36
Total licensed aircraft	73	36	109	60[1]	29	89[1]
Machine flights	10,386	1,209	11,595	4,415	1,437	5,852
Total machine mileage	294,449	185,480	479,929	185,211	181,509	366,720
Number of passengers carried	9,153	1,329	10,482	4,282	856	5,138
Total number of persons carried	19,539	3,474	23,013	8,697	3,465	12,162
Freight or express carried (lbs.)	79,850	Not available.	79,850	14,681	Not available.	14,681
Mail carried (lbs.)	–	–	–	62,025		62,025
Total licensed air harbours	35	6	41	30	6	36
Total licensed personnel	223	64	287	164	46	210
Unlicensed mechanics employed	26	46	72	20	66	86

[1] Includes one amphibian type in commercial use.

The figures shown in the table above indicate decreases in the number of machine flights, passengers carried and other aspects of the general use of air-craft in the Dominion. While decreases are undoubtedly to be recognized, at the same time the point may be made that the amount of useful work carried on by means of aviation has increased substantially. In illustration of this fact, the increase in hours flown on work of a useful nature amounted to 1,781 in 1922 over that of the previous year, despite the decrease in total hours flown of 1,806. The typical post-war air operations of "joy-riding" and exhibition flying are becoming less common, giving way to those of a permanent and productive nature.

A table of civil aviation accidents in 1921 and 1922 follows:

38.—Civil Aviation Accidents in Canada for the calendar years 1921 and 1922.

Items.	1921.			1922.		
	Commercial.	Civil government.	Total.	Commercial.	Civil government.	Total.
Accidents—						
Resulting in death to occupants	3	1	4	–	2	2
Resulting in injury	2	1	3	3	–	3
Not involving injury	10	1	11	4	1	5
Total accidents	15	3	18	7	3	10
Fatalities—						
Pilots killed	1	1	2	–	2	2
Crew killed	–	–	–	–	–	–
Passengers killed	3	–	3	1	1	2
Total personnel killed	4	1	5	1	3	4
Injuries—						
Pilots injured	3	1	4	3	–	3
Crew injured	–	1	1	–	1	1
Passengers injured	3	–	3	6	–	6
Total personnel injured	6	2	8	9	1	10

VIII.—CANALS.

Historical.—Before the period of extensive railway construction which commenced for Canada in the 1850's, the water routes, more especially the St. Lawrence, the Great Lakes, and the Ottawa, were the chief avenues of transportation. These routes were interrupted at certain points, necessitating portages. The canals of Canada were, in the main, constructed to eliminate the toil of unloading, transporting and reloading at the portages.

The earliest mention of canals in Canada is in connection with the Lachine canal, begun by early French settlers in 1700, but only after the conquest of Canada by the British were improvements of the main water routes made, and in the early part of the 19th century, increased internal and foreign trade and the introduction of steam navigation resulted in more attention being given to this work. Although for a time the canals were constructed primarily for military purposes, they soon became essential to the commercial life of the country.

Canal Systems.—There are six canal systems under the control of the Dominion Government in connection with navigable lakes and rivers. They consist of the canals (1) between Port Arthur or Fort William and Montreal; (2) from Montreal to the international boundary near lake Champlain; (3) from Montreal to Ottawa; (4) from Ottawa to Kingston and Perth; (5) from Trenton, lake Ontario, to lake Huron (not completed); and (6) from the Atlantic ocean to Bras d'Or lakes, Cape Breton. The total length of the waterways comprised within these systems is about 1,594 statute miles, the actual mileage of canals constructed being 117·2.

The St. Lawrence group, part of the Montreal to Port Arthur system, comprises seven separate canals at different points between Montreal and Prescott, not including the so-called "submerged" canal or channel dredged through shallow parts of the river between Montreal and Quebec. Chief of these is the Lachine canal, originally designed to be a mile in length, with a width of 12 feet and a depth of 18 inches. First opened in 1824 and finally completed in 1901, it is now navigable by vessels drawing 14 feet of water.

The Welland canal, connecting lake Ontario and lake Erie, overcomes their difference in level of 325½ feet. Commenced in 1824, it was opened in 1829, and has since been remodelled on several occasions. At present the channel from Port Colborne to Thorold is being altered to admit the passage of large lake boats, and a new channel from Thorold to a point 3 miles east of Port Dalhousie is in course of construction. The total distance traversed by the New Welland from lake to lake will be 25 miles. The difference of level between the two lakes will be overcome by seven lift locks, each having a lift of 46½ feet. The locks are to be 800 feet long and 80 feet wide in the clear, and will provide a depth of 30 feet of water over the mitre sills. The width of the canal prism is to be 200 feet. A new breakwater is being built at Port Colborne, extending 2,000 feet farther into the lake than the present one. Extensive harbour works are contemplated for the lake Ontario entrance at Port Weller. It is expected that upon the completion of the New Welland there will be a reduction of about 2 cents a bushel in the freight rate on east-bound grain shipments, and that a large proportion of Canadian grain now being shipped by Buffalo and New York will be diverted to the St. Lawrence route.

The Sault Ste. Marie canal, next in importance to the Welland in respect of tonnage carried, was opened for navigation in 1895, and has been of vital importance to the traffic in grain and iron ore on the Great Lakes. Although a marked decrease in tonnage is shown during the last ten years, much of this is due to the

depression in the iron industry and to improved facilities offered by the American Sault Ste. Marie canal.

The Rideau canal route [systems (3) and (4) above], comprising the canals on the Ottawa river, besides those between Ottawa and Kingston, was placed in operation to provide a safer route, for both military and civil purposes, than the St. Lawrence offered. Between the completion of the Rideau canal in 1834 and the completion of the Grand Trunk railway between Montreal and Toronto, it was regularly used by tens of thousands of immigrants *en route* to Upper Canada.

The Trent canal, a partially completed route between Trenton, on lake Ontario, and Georgian bay, by way of Rice lake, the city of Peterborough and town of Lindsay and lake Simcoe, is as yet of little importance as a traffic route. The abundant power available at many points is, however, of great value to the Ontario Hydro-Electric Power Commission. At Peterborough the canal is equipped with the largest lift-lock in the world.

The St. Peter's canal, constructed between the years 1912 and 1917, connects the Bras d'Or lakes with St. Peter's bay on the southeast coast of Cape Breton island. It consists of a tidal lock 300 feet in length and 48 feet in breadth, and provides for a minimum depth of 18 feet of water on the lock sills.

Projected Canals.—Of the proposed canal schemes, the Georgian Bay route and the deepening of the St. Lawrence waterways are the most prominent. The former, first travelled by Champlain in 1615, from Montreal along the Ottawa and French rivers to Georgian bay, has been strongly advocated on numerous occasions. Its great cost, however, and the loss of time in locking, present serious drawbacks to the undertaking. The construction of the proposed deep waterway along the St. Lawrence from lake Ontario to the sea, for purposes of navigation and power development, has been deferred for the present, after consideration by the Governments of Canada and the United States.

39.—Canals of Canada, Length and Lock Dimensions, 1922.

Name.	Location.	Length in Miles.	Locks.			
			No.	Minimum dimensions.		
				Length.	Width.	Depth.
St. Lawrence and Great Lakes—				Ft.	Ft.	Ft.
Lachine	Montreal to Lachine	8·50	5	270	45	14
Soulanges	Cascades Point to Coteau Landing	14·00	5	280	45	15
Cornwall	Cornwall to Dickinson's Landing	11·00	6	270	45	14
Farran's Point	Farran's Point rapid	1·25	1	800	50	14
Rapide Plat	Rapide Plat to Morrisburg	3·67	2	270	45	14
Galops	Iroquois to Cardinal	7·33	3	270	45	14
Murray	Bay of Quinte to lake Ontario	5·17	0	–	–	12
Welland	Port Dalhousie, lake Ontario to Port Colborne, lake Erie	26·75	26	270	44	14
Sault Ste. Marie	St. Mary's rapids, 47 miles west of lake Huron	1·41	1	900	60	19·5

39.—Canals of Canada, Length and Lock Dimensions, 1922—concluded.

Name.	Location.	Length. in Miles.	Locks.			
			No.	Minimum dimensions		
				Length.	Width.	Depth.
				Ft.	Ft.	Ft.
Ottawa and Rideau rivers—						
Ste. Anne Lock	Junction of St. Lawrence and Ottawa rivers	0·12	1	200	45	9
Carillon	Carillon rapids, Ottawa river	0·75	2	200	45	9
Grenville	Long Sault rapids, Ottawa river	5·75	5	200	45	9
Rideau	Ottawa to Kingston	126·25	47	134	33	5
	Rideau lake to Perth (Tay branch),	7·00	2	134	33	5
Richelieu river—						
St. Ours Lock	St. Ours, Que	0·12	1	200	45	7
Chambly	Chambly to St. Johns, Que	12·00	9	118	22·5	7
Miscellaneous—						
Trent	Trenton to Peterborough lock, Peterborough	89·0	18	175	33	8·3
	Peterborough lock to head of lake Couchiching	114·6	23	134	33	6
	Sturgeon lake to Port Perry (Scugog branch)	30·0	1	142	33	6
St. Peter's	St. Peter's bay to Bras d'Or lakes, Cape Breton, N.S.	0·49	1	300	48	18
St. Andrew's	Red river, 15 miles north of Winnipeg	–	1	215	45	17

Canal Traffic.—Tables **40** to **46** illustrate the nature of traffic passing through Canadian canals in 1922. It will be noticed that an increase of 619,034 is shown over the total tonnage carried in the season of 1921. Much of this is due to the heavy grain trade from ports on the Upper Lakes. Its influence is clearly shown by the marked excess of down traffic over that moving inland. The duration of the season of navigation and the comparative density of traffic during the months from May to October, together with the progressive yearly tendency for traffic to be heavier in the fall months than in the earlier summer months, is shown in Table **41.** The various classes of traffic and the exact articles comprising them are shown in Tables **42** and **43,** for the years 1921 and 1922. The preponderance of farm and mine products is an obvious one, the volume of the latter, however, showing a decrease when compared with that of 1921. The difference is due largely to the smaller quantity of American coal imported, a difference (hard and soft coal passing through the canals only) of 807,954 tons. Increases in volume of individual articles transported over the canals are most marked in the case of rye, wheat, miscellaneous iron and steel products, sugar and sawed lumber.

Table **44** giving traffic details of the canal at Sault Ste. Marie (long the most important canal in Canada) shows a continued decrease in numbers of vessels and freight carried. The principal reason for its comparative disuse is to be found in the recent improvements effected in the American Sault Canal, which, with the Canadian, is available for vessels of either country. In the following table, however, the increase over 1921 in the total traffic of all canals is indicated by nationality of vessels. The figures for 1922, nevertheless, show a total of but 19 p.c. of that of 1913, the record year. A more detailed analysis by individual canals is given in Table **46.**

40.—Canal Traffic during the Navigation Seasons of 1921 and 1922, by direction and origin.

Canals.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1921.								
Sault Ste. Marie	208,104	1,187,064	2,241	87,161	56,150	354,023	83,029	19,820
Welland	198,064	1,626,441	61,297	–	12,592	7,123	4,224	1,166,681
St. Lawrence[1]	398,440	1,758,958	217,446	15,349	750	–	3,759	1,339,363
Chambly	4,008	7,248	70,335	830	–	–	–	97,859
St. Peter's	13,283	42,840	–	–	–	–	–	–
Murray	44,960	320	–	–	–	–	–	–
Ottawa	14,593	140,501	–	13,184	–	–	3,491	–
Rideau	64,050	28,593	3	–	–	–	–	2,366
Trent	14,442	29,805	–	–	–	–	–	–
St. Andrew's	5,892	339	–	–	–	–	–	–
Total	**965,836**	**4,822,109**	**351,322**	**116,524**	**69,492**	**361,146**	**94,503**	**2,626,089**
1922.								
Sault Ste. Marie	258,974	925,865	5,558	86,735	45,473	306,492	57,510	22,453
Welland	252,328	1,955,760	62,993	–	12,947	33,779	1,000	1,072,612
St. Lawrence[1]	747,757	2,082,814	237,008	39,157	3,600	–	4,294	1,205,289
Chambly	3,103	6,281	134,829	–	–	–	–	38,830
St. Peter's	12,551	40,186	–	–	–	–	–	–
Murray	1,330	–	513	–	–	–	–	–
Ottawa	26,592	143,764	–	38,584	–	–	4,287	–
Rideau	64,662	21,455	–	265	–	–	–	–
Trent	18,033	25,005	–	–	–	–	–	–
St. Andrew's	25,104	283	–	–	–	–	–	–
Total	**1,410,434**	**5,201,413**	**440,901**	**164,741**	**62,020**	**340,271**	**67,091**	**2,339,184**

Canals.	Total Traffic by Direction.		Origin of Cargo.		Total Cargo.	Increase (+ or decrease (–) on previous year.
	Up.	Down.	Canadian.	United States.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1921.						
Sault Ste. Marie	349,524	1,648,068	1,483,444	514,148	1,997,592	– 480,226
Welland	276,177	2,800,245	1,036,410	2,040,012	3,076,422	+ 800,350
St. Lawrence[1]	620,395	3,113,670	1,547,743	2,186,322	3,734,065	+ 666,103
Chambly	74,343	105,937	82,421	97,859	180,280	– 145,042
St. Peter's	13,283	42,840	56,123	–	56,123	– 5,250
Murray	44,960	320	45,280	–	45,280	– 90,955
Ottawa	18,084	153,685	168,278	3,491	171,769	– 61,560
Rideau	64,053	30,959	92,015	2,997	95,012	– 2,825
Trent	14,442	29,805	44,083	164	44,247	– 9,413
St. Andrew's	5,892	339	6,231	–	6,231	+ 456
Total	**1,481,153**	**7,925,868**	**4,562,028**	**4,844,993**	**9,407,021**	**+ 671,638**
1922.						
Sault Ste. Marie	367,515	1,341,545	1,258,860	450,200	1,709,060	– 288,532
Welland	329,268	3,062,151	1,802,605	1,588,814	3,391,419	+ 314,997
St. Lawrence[1]	992,659	3,327,260	2,649,585	1,670,334	4,319,919	+ 585,854
Chambly	137,932	45,111	143,943	39,100	183,043	+ 2,763
St. Peter's	12,551	40,186	52,737	–	52,737	– 3,386
Murray	1,843	–	1,843	–	1,843	– 43,437
Ottawa	30,879	182,348	208,940	4,287	213,227	+ 41,458
Rideau	64,662	21,720	86,369	13	86,382	– 8,630
Trent	18,033	25,005	42,958	80	43,038	– 1,209
St. Andrew's	25,104	283	25,387	–	25,387	+ 19,156
Total	**1,980,446**	**8,045,609**	**6,273,227**	**3,762,828**	**10,036,055**	**+ 619,084**

[1]Includes only the canals on the St. Lawrence river between Lachine and lake Ontario.

41.—Distribution of Total Canal Traffic, by months, 1917-1922.

Months.	1917.	1918.	1919.	1920.	1921.	1922.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
January	533	–	759	60	422	80
April	63,651	88,446	404,928	53,834	248,026	236,246
May	3,026,990	3,351,440	2,278,145	1,263,740	1,233,905	1,224,196
June	3,575,885	2,749,323	1,530,317	1,234,352	1,376,156	1,252,478
July	4,013,982	2,580,177	1,483,124	1,272,797	1,456,306	1,517,609
August	3,520,647	2,332,796	1,224,110	1,458,549	1,331,327	1,427,189
September	2,708,184	2,687,581	1,162,970	1,258,744	1,293,724	1,507,219
October	2,544,732	2,940,663	1,100,455	1,217,795	1,425,691	1,464,493
November	2,500,096	1,933,627	702,457	856,417	910,420	1,207,161
December	284,235	219,566	108,001	119,095	131,044	189,384
Total	**22,238,935**	**18,883,619**	**9,995,266**	**8,735,383**	**9,407,021**	**10,026,055**

42.—Tonnage of Traffic by Canals and Classes of Products, 1921-1922.

Canals.	Farm Products.	Manufactures.	Forest Products.	Mine Products.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.
1921.					
Sault Ste. Marie	1,438,140	258,527	45,880	255,045	1,997,592
Welland	1,873,943	204,689	155,081	842,709	3,076,422
St. Lawrence	1,902,024	295,644	363,412	1,172,985	3,734,065
Chambly	6,365	9,516	71,586	92,813	180,280
St. Peter's	12,519	6,867	491	36,246	56,123
Murray	–	780	75	44,425	45,280
Ottawa	5,386	19,767	50,689	95,927	171,769
Rideau	2,455	14,197	4,613	73,747	95,012
Trent	1,629	2,197	39,855	566	44,247
St. Andrew's	3	455	5,730	43	6,231
Total	**5,242,464**	**812,639**	**737,412**	**2,614,506**	**9,407,021**
1922.					
Sault Ste. Marie	1,173,530	316,697	7,352	209,481	1,709,060
Welland	2,572,094	280,476	156,663	382,186	3,391,419
St. Lawrence	2,579,881	373,193	432,394	934,451	4,319,919
Chambly	5,799	23,184	129,775	24,285	183,043
St. Peter's	9,499	6,260	732	36,246	52,737
Murray	60	513	–	1,270	1,843
Ottawa	5,498	29,599	88,871	89,259	213,227
Rideau	2,532	19,399	6,225	58,226	86,382
Trent	1,302	2,227	35,580	3,929	43,038
St. Andrew's	45	201	4,621	20,520	25,387
Total	**6,350,240**	**1,051,749**	**864,213**	**1,759,853**	**10,026,055**

43.—Principal Articles carried through Canadian Canals during the Navigation Seasons of 1921 and 1922.

Articles.	1921.	1922.	Increase.	Decrease.
	Tons.	Tons.	Tons.	Tons.
Barley	224,315	262,024	37,709	–
Buckwheat	1,729	42	–	1,687
Corn	1,551,947	860,604	–	691,343
Oats	599,066	415,823	–	183,243
Rye	118,388	301,262	182,874	–
Flaxseed	40,688	52,394	11,706	–
Peas	128	55	–	73
Wheat	2,172,442	3,891,381	1,718,939	–
Flour	456,093	506,032	49,939	–
Hay	10,288	8,702	–	1,586
Other mill products	44,123	31,681	–	12,442
Fruit and vegetables	3,549	3,013	–	536
Potatoes	6,012	5,010	–	1,002
Live stock	992	964	–	28
Poultry, game and fish	2,984	2,541	–	443
Dressed meats	30	34	4	–
Other packing house products	2,766	1,496	–	1,270

43.—Principal Articles carried through Canadian Canals during the Navigation Seasons of 1921 and 1922—concluded.

Articles.	1921.	1922.	Increase.	Decrease.
	Tons.	Tons.	Tons.	Tons.
Hides and leather	18	42	24	-
Wool	17	599	582	-
All other animal products	6,889	6,541	-	348
Agricultural implements	19,757	9,726	-	10,031
Cement, bricks and lime	18,300	27,291	8,991	-
Household goods and furniture	3,417	3,388	-	29
Iron, pig and bloom	7,806	22,114	14,308	-
Iron and steel, all other	69,807	165,365	95,558	-
Petroleum and other oils	238,993	166,177	-	72,816
Sugar	58,681	122,119	63,438	-
Salt	10,911	13,198	2,287	-
Wines, liquors and beer	5,132	5,741	609	-
Merchandise not enumerated	379,835	516,630	136,795	-
Pulpwood	491,041	511,549	20,508	-
Sawed lumber	193,230	317,335	124,105	-
Squared timber	11,465	3,360	-	8,105
Shingles	3,214	821	-	2,393
Other woods	38,462	31,148	-	7,314
Hard coal	341,522	199,010	-	142,512
Soft coal	1,651,740	986,298	-	665,442
Coke	10,202	2,132	-	8,070
Copper ore	6,140	34,233	25,093	-
Iron ore	127,615	91,245	-	36,370
Other ore	9,547	808	-	8,739
Sand, etc	464,740	446,127	-	18,613
Total	**9,497,021**	**10,026,055**	**619,034**	**-**

44.—Traffic through the Canadian Sault Ste. Marie Canal during the Navigation Seasons, 1900-22, by Nationality of Vessel and Origin of Freight.

Years.	Canadian.		United States.		Total No.	Total Vessel Tonnage.	Tonnage of Freight.		
	No.	Vessel Tonnage.	No.	Vessel Tonnage.			Canadian.	United States.	Total.
1900....	1,790	577,310	1,291	1,617,438	3,081	2,194,748	255,264	1,780,413	2,035,677
1901....	2,796	775,151	1,408	1,674,597	4,204	2,449,748	494,613	2,325,781	2,820,394
1902....	3,080	1,366,930	1,964	3,237,372	5,044	4,604,302	1,140,623	3,588,645	4,729,268
1903....	2,711	1,615,939	1,640	3,146,807	4,351	4,762,746	1,362,820	4,149,048	5,511,868
1904....	2,637	1,555,042	1,325	2,675,663	3,962	4,230,705	1,212,145	3,818,560	5,030,705
1905....	3,970	1,803,288	1,692	3,734,349	5,662	5,537,637	1,304,355	4,169,051	5,473,406
1906....	3,922	1,959,252	1,758	4,399,872	5,680	6,359,124	1,632,683	4,941,363	6,574,046
1907....	3,217	2,154,688	3,132	9,961,281	6,349	12,115,969	1,957,334	13,630,831	15,588,165
1908....	3,289	2,603,232	2,004	7,035,655	5,293	9,638,887	2,092,231	10,666,985	12,759,216
1909....	2,597	2,988,936	3,734	14,850,738	6,331	17,839,674	3,366,495	24,494,750	27,861,245
1910....	2,744	3,173,494	5,228	20,187,704	7,972	23,361,198	3,378,268	33,107,419	36,395,687
1911....	2,713	3,108,880	4,068	16,252,340	6,781	19,361,220	3,177,581	27,774,128	30,951,709
1912....	2,643	3,296,229	5,213	22,536,015	7,856	25,832,244	4,090,362	35,579,293	39,669,655
1913....	3,279	3,793,434	5,006	22,181,007	8,285	25,974,441	4,954,734	37,744,590	42,699,324
1914....	3,011	3,473,292	2,966	13,827,870	5,977	17,301,162	3,609,747	23,989,437	27,599,184
1915....	3,000	3,041,003	1,331	5,443,812	4,331	8,484,815	2,561,734	5,189,223	7,750,957
1916....	4,595	4,089,937	2,094	8,703,187	6,689	12,793,124	4,155,911	12,657,738	16,813,649
1917....	3,199	3,182,960	2,138	8,712,604	5,337	11,895,564	2,875,590	12,571,502	15,447,092
1918....	3,067	2,436,500	1,992	7,594,042	5,059	10,030,542	1,336,861	11,576,850	12,913,711
1919....	3,140	2,817,096	929	3,671,634	4,069	6,488,730	1,606,311	2,531,774	4,138,085
1920....	3,239	2,415,775	771	2,725,431	4,010	5,141,206	1,286,251	1,191,567	2,477,818
1921....	3,464	2,676,320	399	1,115,072	3,863	3,791,392	1,483,444	514,148	1,997,592
1922....	3,021	3,010,713	481	1,733,761	3,502	4,474,474	1,258,860	450,200	1,709,060

45.—Traffic through all Canadian Canals during the Navigation Seasons, 1900-1922, by Nationality of Vessel and Origin of Freight.

Years.	Canadian Vessels.		United States Vessels.		Freight Carried.				
					Originating in Canada.		Originating in United States.		Total.
	No.	Registered Tonnage.	No.	Registered Tonnage.	Tons.	Per cent of Total	Tons.	Per cent of Total	Tons.
1900..	21,755	4,129,250	5,502	2,408,985	–	–	–	–	5,013,693
1901..	20,860	3,980,264	5,634	2,482,274	–	–	–	–	5,665,259
1902..	22,198	4,485,695	6,433	4,086,439	–	–	–	–	7,513,197
1903..	23,767	5,212,832	6,695	4,236,475	–	–	–	–	9,203,817
1904..	21,851	4,772,100	6,253	3,655,905	–	–	–	–	8,256,236
1905..	23,726	5,191,191	7,085	5,096,241	–	–	–	–	9,371,744
1906..	25,498	5,526,321	7,319	5,685,315	–	–	–	–	10,523,185
1907..	28,833	6,328,911	9,328	11,604,834	–	–	–	–	20,543,639
1908..	29,040	6,780,789	7,489	8,521,139	5,012,147	28·6	12,490,673	71·3	17,502,820
1909..	22,507	7,811,578	9,996	16,459,322	7,378,057	21·8	26,342,691	78·2	33,720,748
1910..	25,337	8,931,790	11,462	21,777,297	7,883,614	18·3	35,106,994	81·7	42,990,608
1911..	25,585	9,172,192	10,370	18,231,622	7,792,907	20·5	30,237,446	79·5	38,030,353
1912..	27,371	10,237,335	11,785	24,636,190	9,376,529	19·7	38,210,716	80·3	47,587,245
1913..	28,654	12,078,041	10,739	24,238,788	11,130,875	21·3	40,923,038	78·7	52,053,913
1914..	26,125	12,050,856	7,742	15,636,414	9,382,206	25·3	27,641,031	74·7	37,023,237
1915..	21,575	9,398,207	6,415	7,385,101	6,789,423	44·7	8,409,380	55·3	15,198,803
1916..	23,002	9,839,029	6,800	10,660,839	7,486,962	31·7	16,096,529	68·3	23,583,491
1917..	21,588	9,831,694	6,594	10,259,772	5,964,369	26·8	16,274,566	73·2	22,238,935
1918..	18,909	7,800,972	6,791	9,616,200	3,369,477	17·8	15,514,142	82·2	18,883,619
1919..	20,682	8,735,973	4,092	5,259,173	4,865,831	48·7	5,129,435	51·3	9,995,266
1920..	23,038	8,521,643	3,826	3,838,890	4,094,044	46·9	4,641,339	53·1	8,735,383
1921..	25,720	10,079,388	2,969	2,330,178	4,562,028	48·5	4,844,993	51·5	9,407,021
1922..	26,217	11,059,261	3,735	3,165,054	6,273,227	62·1	3,752,828	37·9	10,026,055

NOTE.—For Canadian Canal Traffic from 1886 to 1899, see 1902 Year Book, p. 398.

46.—Traffic through individual Canadian Canals during the Navigation Seasons, 1918-1922.

SAULT STE. MARIE CANAL.

Years.	Canadian Vessels.				United States Vessels.				Passengers.	Freight carried.
	Steamers.	Sail.	Total.	Vessel Tonnage.	Steamers.	Sail.	Total.	Vessel Tonnage.		
	No.	No.	No.	Tons.	No.	No.	No.	Tons.	No.	Tons.
1918	2,786	281	3,067	2,436,500	1,976	16	1,992	7,594,042	26,986	12,913,711
1919	2,807	333	3,140	2,817,096	890	39	929	3,671,634	41,099	4,138,085
1920	2,882	357	3,239	2,415,775	666	105	771	2,725,431	43,455	2,477,818
1921	3,234	230	3,464	2,676,320	319	80	399	1,115,072	42,767	1,997,592
1922	2,876	145	3,021	3,010,713	462	19	481	1,733,761	35,696	1,709,060
WELLAND CANAL.										
1918	1,726	362	2,088	1,760,301	970	134	1,104	835,088	–	2,174,298
1919	2,038	306	2,344	1,924,419	853	16	869	691,595	–	2,170,779
1920	2,009	421	2,430	2,013,817	610	84	694	514,439	–	2,276,072
1921	2,673	365	3,038	2,761,228	714	18	732	568,143	–	3,076,422
1922	2,677	411	3,088	2,867,768	735	78	813	677,967	408	3,391,419
ST. LAWRENCE CANALS.										
1918	3,430	2,257	5,687	2,839,918	1,122	488	1,610	970,107	45,943	3,031,134
1919	3,910	1,972	5,882	3,107,773	878	188	1,066	769,172	72,006	2,891,619
1920	3,774	2,371	6,145	3,233,029	545	268	813	442,250	62,397	3,067,962
1921	6,241	2,165	8,406	3,939,233	674	130	804	545,610	56,905	3,734,065
1922	7,836	2,648	10,484	4,453,716	634	294	928	614,232	72,433	4,319,919
CHAMBLY CANAL.										
1918	146	425	571	86,402	–	1,726	1,726	177,320	1,783	369,186
1919	138	245	383	65,604	1	1,039	1,040	107,605	1,403	242,961
1920	135	365	500	77,666	2	1,293	1,295	134,978	1,206	325,322
1921	260	134	394	58,869	2	842	844	87,931	1,149	180,280
1922	270	136	406	57,218	18	994	1,012	107,290	786	183,043

46.—Traffic through individual Canadian Canals during the Navigation Seasons, 1918-1922—concluded.

Year.	Canadian Vessels.				United States Vessels.				Passengers.	Freight carried.
	Steamers.	Sail.	Total.	Vessel Tonnage.	Steamers.	Sail.	Total.	Vessel Tonnage.		
	No.	No.	No.	Tons.	No.	No.	No.	Tons.	No.	Tons.
ST. PETER'S CANAL.										
1918	232	835	1,067	68,741	–	4	4	546	479	59,716
1919	291	864	1,155	78,412	16	1	17	1,522	322	64,879
1920	306	888	1,194	82,908	8	–	8	524	1,881	61,373
1921	340	769	1,109	76,327	4	4	8	698	757	56,123
1922	347	720	1,067	74,702	1	6	7	393	740	52,737
MURRAY CANAL.										
1918	342	96	438	114,573	15	–	15	1,146	4	44,735
1919	436	150	586	152,610	16	5	21	2,434	1,099	108,250
1920	504	247	751	142,812	22	11	33	812	3,414	136,235
1921	293	139	432	57,726	41	12	53	1,145	7,104	45,280
1922	366	36	402	15,254	199	–	199	2,306	465	1,843
OTTAWA CANAL.										
1918	572	593	1,165	218,992	–	323	323	34,498	14,939	167,170
1919	510	1,132	1,642	286,089	1	147	148	15,019	21,380	218,438
1920	360	1,013	1,373	249,934	–	178	178	19,195	550	233,329
1921	832	874	1,706	229,469	–	101	101	11,130	2,712	171,769
1922	1,097	833	1,930	282,104	2	265	267	28,650	19,968	213,227
RIDEAU CANAL										
1918	1,031	125	1,156	75,487	–	8	8	3,316	16,926	54,136
1919	1,502	331	1,833	122,576	–	2	2	192	17,026	103,539
1920	1,271	438	1,709	118,751	7	2	9	1,124	14,785	97,837
1921	1,227	214	1,441	99,832	–	2	2	204	11,484	95,012
1922	1,421	472	1,893	105,840	3	2	5	242	6,319	86,382
TRENT CANAL.										
1918	2,711	829	3,540	171,996	9	–	9	137	98,437	64,893
1919	3,011	583	3,594	155,895	–	–	–	–	101,561	52,953
1920	4,871	672	5,543	160,584	25	–	25	137	97,849	53,660
1921	4,589	607	5,196	152,870	26	–	26	245	100,049	44,247
1922	2,985	679	3,664	145,422	23	–	23	213	80,574	43,038
ST. ANDREW'S CANAL.										
1918	99	31	130	28,062	–	–	–	–	6,654	4,640
1919	92	31	123	25,499	–	–	–	–	6,160	3,763
1920	93	61	154	26,367	–	–	–	–	4,931	5,775
1921	76	458	534	27,514	–	–	–	–	7,202	6,231
1922	149	113	262	46,524	–	–	–	–	2,130	25,387
SUMMARY.										
1918	13,075	5,834	18,909	7,800,972	4,092	2,699	6,791	9,616,200	212,151	18,883,619
1919	14,735	5,947	20,682	8,735,973	2,655	1,437	4,092	5,259,173	262,056	9,995,266
1920	16,205	6,833	23,038	8,521,643	1,885	1,941	3,826	3,838,890	230,468	8,735,383
1921	19,765	5,955	25,720	10,079,388	1,780	1,189	2,969	2,330,178	230,129	9,407,021
1922	20,024	6,193	26,217	11,059,261	2,077	1,658	3,735	3,165,054	219,519	10,026,055

Government Expenditure on Canals.—Tables 47 and 48 deal with the expenditure by the Dominion Government on the construction and maintenance of canals. The items of revenue and expenditure, while showing a smaller total outlay resulting from a decreased expenditure combined with an augmented revenue, indicate the net outlay entailed in the maintenance of these water routes. All canals, it may be added, have since 1904 been free of toll to vessels applying for the privilege of locking facilities. The largest single revenue items are those of $294,559 dues from the government elevator on the Welland canal, $171,575 rents from Lachine canal property, and $187,819 rents from Trent canal power facilities. The total cost of Canadian canals since their construction was begun is set at $141,425,373.

47.—Total Expenditure and Revenue of Canals, 1868-1922, and before Confederation.

Fiscal Years.	Expenditure Chargeable— To Capital.	To Income.	To Revenue.[1]	For Staff.	For Repairs.	Total Expenditure.	Revenue of Canals.
	$	$	$	$	$	$	$
Before Confederation	20,593,866	98,378	–	–	–	20,692,244	–
1868-1900	58,449,977	2,857,040	820,973	7,618,245	5,915,591	75,661,826	12,401,918
1901	2,360,570	147,768	61,639	314,095	262,876	3,147,248	315,426
1902	2,114,690	216,703	65,771	317,839	263,768	2,978,771	300,414
1903	1,823,274	277,596	63,175	390,282	294,114	2,848,441	230,213
1904	1,880,787	302,409	66,067	381,017	350,279	2,980,559	79,537
1905	2,071,594	354,353	64,515	431,500	401,743	3,323,705	78,009
1906	1,552,121	319,877	62,172	447,963	375,889	2,758,022	108,068
1907 (9 months)	887,839	264,111	66,251	329,630	287,231	1,835,062	105,003
1908	1,723,156	508,010	105,519	473,639	411,661	3,221,985	144,882
1909	1,873,869	728,125	106,066	475,515	433,958	3,617,533	199,501
1910	1,650,707	489,256	111,756	515,585	491,793	3,259,097	193,384
1911	2,349,474	440,270	103,398	511,306	471,530	3,875,978	221,138
1912	2,560,939	442,012	110,049	585,900	555,710	4,254,610	264,114
1913	2,259,257	331,987	121,371	605,248	535,136	3,852,999	307,568
1914	2,829,661	389,285	147,729	642,845	574,039	4,583,559	380,188
1915	5,490,796	444,730	140,236	675,771	562,599	7,314,132	427,763
1916	6,142,149	397,665	139,952	697,532	529,565	7,906,863	446,722
1917	4,304,589	399,414	137,907	700,022	486,168	6,028,100	461,423
1918	1,781,957	111,553	149,859	743,857	540,331	3,327,557	414,868
1919	2,211,935	164,046	156,558	733,091	698,878	3,964,508	387,655
1920	4,579,565	798,113	158,153	745,986	713,335	6,995,152	442,193
1921	5,449,962	1,193,143	192,944	815,979	920,993	8,573,021	366,011
1922	4,482,639	836,810	209,201	983,042	1,105,054	7,616,746	804,519
Totals	**141,425,373**	**12,512,654**	**3,361,562**	**20,135,890**	**17,182,241**	**194,617,720**	**19,080,517**

[1] Expenditure for Staff and Repairs, Canals in general.

NOTE.—For the years 1868 to 1900, see Canada Year Book, 1916-17, page 462.

48.—Capital Expenditure for Construction and Enlargement of Canals for the fiscal years 1868-1922, and b fore Confederation.

Canals.	Expenditure, Previous Years.	Expenditure, 1921-22.	Total Cost.
Beauharnois	$ 1,636,690	$ –	$ 1,636,690
Carillon and Grenville[1]	4,191,756	–	4,191,756
Chambly	780,996	–	780,996
Cornwall	7,246,304	–	7,246,304
Culbute Lock and Dam	382,391	–	382,391
Lachine	14,132,685	–	14,132,685
Lake St. Francis	75,907	–	75,907
Lake St. Louis	298,176	–	298,176
Murray	1,248,947	–	1,248,947
Rideau	4,210,274	–	4,210,274
Sault Ste. Marie	4,935,809	–	4,935,809
Soulanges	7,904,045	–	7,904,045
St. Anne's Lock and Canal	1,170,216	–	1,170,216
St. Lawrence River and Canals—			
North Channel	1,995,143	–	1,995,143
River Reaches	483,830	–	483,830
Galops Channel	1,039,896	–	1,039,896
St. Ours Lock	127,229	–	127,229
St. Peter's	648,547	–	648,547
Tay	489,599	–	489,599
Trent	18,654,196	195,823	18,850,019
Welland	29,399,406	7,000	29,406,406
Welland Ship Canal	25,340,733	4,279,816	29,620,549
Williamsburg—Farrans Point	877,091	–	877,091
Williamsburg—Galops	6,143,468	–	6,143,468
Williamsburg—Rapide Plat	2,159,881	–	2,159,881
Williamsburg—Williamsburg	1,334,552	–	1,334,552
Canals in general	34,967	–	34,967
Total	**136,942,734**	**4,482,639**	**141,425,373**

[1] The records relating to cost of construction by Imperial Government were destroyed by fire in 1852, and the statistics are not included in this table.

The Panama Canal.—The Panama canal, which was opened to commercial traffic on August 15, 1914, is a waterway which is destined to be of the greatest importance to the British Columbian ports, from which vessels now leave direct for Great Britain and European ports throughout the year. As an alternative route to that of the transcontinental railway lines, such a passage by water is of vital importance in the solution of the larger transportation problems of the continent, and while its influence is perhaps more potential than actual, such a check on transcontinental rail rates is a valuable one. During the war the great expectations based upon the opening of the canal were not realized, owing to the scarcity of shipping, but with the decline in ocean freight rates an increase in traffic between our Pacific ports and Europe is occurring. While no Canadian vessels passed through the canal in 1922, a tonnage of 25,174 originating from our eastern coast and a total of 148,305 tons destined for ports on our western coast were carried through in British and foreign bottoms. The greater importance of the route as one from Pacific ports to the European continent is shown by the total of 180,981 tons from western Canadian ports locked through on the voyage eastward. Tables 49 and 50 give the more important figures of nationalities of vessels using the canal facilities, together with the volume of traffic since 1915.

49.—Traffic through the Panama Canal by Nationality of Vessels, years ended June 30, 1919-1922.[1]

Nationality.	1919.		1920.		1921.		1922.	
	Atlantic to Pacific.	Pacific to Atlantic.	Atlantic to Pacific.	Pacific to Atlantic.	Atlantic to Pacific.	Pacific to Atlantic.	Atlantic to Pacific.	Pacific to Atlantic.
	No.	No.	No.	No.	No.	No.	No.	No.
Argentinian	–	–	–	–	–	–	–	–
Belgian	–	1	–	1	1	1	–	–
Brazilian	–	–	2	1	1	–	–	–
British	306	299	393	360	502	470	533	402
Canadian	2	–	–	–	–	–	–	–
Chilean	48	45	38	41	40	23	27	26
Chinese	2	2	2	–	2	2	–	–
Colombian	1	–	–	1	–	–	–	–
Costa Rican	6	6	–	1	8	8	1	–
Cuban	–	–	–	–	–	1	–	–
Danish	37	42	4	5	28	32	25	28
Dutch	6	13	17	12	26	24	34	32
Ecuadorian	–	1	–	–	–	–	–	–
Finnish	–	–	–	–	–	2	–	–
French	29	75	9	51	26	18	28	23
German	–	–	5	12	3	16	20	17
Greek	1	2	–	–	–	–	3	2
Italian	–	–	13	13	13	12	11	9
Japanese	47	40	84	34	86	50	122	67
Mexican	–	1	–	–	4	–	6	–
Norwegian	56	72	46	60	76	64	68	45
Panaman	–	–	3	1	5	3	3	5
Peruvian	33	31	37	38	32	28	30	30
Portuguese	–	–	1	1	–	–	–	–
Russian	3	–	2	–	1	3	–	–
Spanish	2	3	20	21	22	22	4	5
Swedish	10	17	10	9	15	10	21	14
United States	267	517	493	636	579	631	573	522
Uruguayan	1	–	1	–	–	–	–	–
Jugoslavian	–	–	–	–	1	1	–	–
Total	**857**	**1,167**	**1,180**	**1,298**	**1,471**	**1,421**	**1,509**	**1,227**

[1]From Annual Report of the Governor of the Panama Canal, 1922.

50.—Summary of Commercial Traffic through the Panama Canal, years ended June 30, 1915-1922.[1]

Years.	Atlantic to Pacific.		Pacific to Atlantic.		Total Traffic.	
	Vessels.	Cargo Tonnage.	Vessels.	Cargo Tonnage.	Vessels.	Cargo Tonnage.
1915	522	2,070,993	553	2,817,461	1,075	4,888,454
1916	396	1,369,019	362	1,725,095	758	3,094,114
1917	874	2,929,260	929	4,129,303	1,803	7,058,563
1918	915	2,639,300	1,154	4,892,731	2,069	7,532,031
1919	857	2,740,254	1,167	4,176,367	2,024	6,916,621
1920	1,180	4,092,516	1,298	5,281,983	2,478	9,374,499
1921	1,471	5,892,078	1,421	5,707,136	2,892	11,599,214
1922	1,509	5,495,934	1,227	5,388,976	2,736	10,884,910
Total	**7,724**	**27,229,354**	**8,111**	**34,119,052**	**15,835**	**61,348,406**

[1]From Annual Report of the Governor of the Panama Canal, 1922.

IX.—SHIPPING AND NAVIGATION.

Canadian shipping may be divided into two classes, ocean shipping and that on inland waters. Whereas, in the case of most countries of such an extensive coast line, the former is much the more important, in Canada shipping on inland waters, while finally dependent to a large extent on ocean traffic to foreign ports, shares almost equally with that of the Atlantic and Pacific oceans the attention devoted to water traffic.

Ocean Shipping.—Canadian ocean shipping dates back to the days of early European fishermen who frequented the shores of Newfoundland and the Maritime provinces. Ocean-going vessels of that time were crude, wooden sailing craft of but 20 or 30 tons burden, to be entrusted only to the guidance of hardy mariners for navigation through nearly unknown seas. Further exploration and settlement produced a larger volume of traffic, but it was not until the building of ships in Canada by the French assumed some dimensions that traffic became important. The first ocean-going vessels in Canada were probably built by Pont-Gravé, one of the first settlers in New France, and soon afterwards Talon and Hocquart, intendants of the colony, realizing the advantages offered to the industry by the timber resources available, gave it every encouragement. Shipyards were established at Quebec and other points along the St. Lawrence, and these, together with later establishments on the western coast, have formed one of the principal bases of Canadian shipping on the Atlantic and the Pacific.

Canadian shipping attained some prominence in the days of fast wooden sailing vessels, and also at a later date when steam power first came into use. In 1833 the Royal William, a Canadian ship built to ply between Quebec and Halifax, crossed the Atlantic from Pictou to London, the first vessel to navigate the Atlantic under steam power. A few years later Samuel Cunard established the well known steamship line of that name. His company pursued a conservative course; wooden ships were used long after iron hulls were a proven success, and paddle wheels after the introduction of the screw propeller. By 1867 the company's business had shifted to New York, and its terminal was moved there from Halifax. The Allan line had a somewhat similar early history, but has remained a purely Canadian company. In addition to other lines of less importance, both the C.P.R. and C.N.R. operate ocean fleets on the Atlantic and the Pacific in conjunction with their railway systems.

In the following Tables, statistics are given of sea-going vessels entered and cleared at Canadian ports during the fiscal years 1921 and 1922, of entrances and clearings at principal ports during the same year, and related matters. The number and particularly the tonnage of vessels entered and cleared from Canadian ports in both ocean and coasting trade indicates clearly the predominance of British shipping in Canadian waters over that of all other nations. This is particularly the case on the Atlantic coast, where the bulk of our European and South American trade is handled. Figures for 1922 show a moderate revival in the shipping industry.

51.—Sea-going Vessels (exclusive of Coasting Vessels) Entered and Cleared at Canadian Ports during the fiscal years 1921 and 1922.

Nationalities.	Number of Vessels.	Tons Register.	Freight.		Number of Crew.
			Tons Weight.	Tons Measurement.	
1921. ENTERED.					
British	2,250	5,389,120	1,091,848	247,897	165,494
Canadian	6,234	2,866,100	699,133	89,300	142,198
Foreign	8,874	4,261,283	1,306,731	30,295	132,254
Total	**17,358**	**12,516,503**	**3,097,712**	**367,492**	**439,946**
CLEARED.					
British	2,276	5,156,499	3,570,943	827,235	145,786
Canadian	6,256	2,644,384	1,453,858	301,259	143,581
Foreign	8,750	4,599,343	2,247,502	349,417	143,727
Total	**17,282**	**12,400,226**	**7,272,303**	**1,477,911**	**433,094**
TOTAL ENTERED AND CLEARED.					
British	4,526	10,545,619	4,662,791	1,075,132	311,280
Canadian	12,490	5,510,484	2,152,991	390,559	285,779
Foreign	17,624	8,860,626	3,554,233	379,712	275,981
Total	**34,640**	**24,916,729**	**10,370,015**	**1,845,403**	**873,040**
1922. ENTERED.					
British	2,152	5,408,055	539,404	216,217	155,186
Canadian	7,330	3,348,830	1,061,740	73,857	146,332
Foreign	8,675	4,863,298	1,337,250	26,150	146,824
Total	**18,157**	**13,620,183**	**2,938,394**	**316,224**	**448,342**
CLEARED.					
British	2,087	5,063,348	3,731,087	323,785	134,538
Canadian	7,599	3,512,372	1,714,569	347,751	153,787
Foreign	8,495	5,398,567	2,812,046	233,659	151,851
Total	**18,181**	**13,974,287**	**8,257,702**	**905,195**	**440,176**
TOTAL ENTERED AND CLEARED.					
British	4,239	10,471,403	4,270,491	540,002	289,724
Canadian	14,929	6,861,202	2,776,309	421,608	300,119
Foreign	17,170	10,261,865	4,149,296	259,809	298,675
Total	**36,338**	**27,594,470**	**11,196,096**	**1,221,419**	**888,518**

52.—Sea-going Vessels Entered and Cleared at the Principal Ports of Canada, fiscal year 1922.

Ports.	British.		Foreign.		Total.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
Alert Bay, B.C.	19	4,493	139	4,478	158	8,971
Anyox, B.C.	46	42,623	7	18,108	53	60,731
Baddeck, N.S.	86	5,817	39	52,853	125	58,670
Bathurst, N.B.	40	8,038	8	9,992	48	18,030
Bonne Esperance, Que.	59	10,113	2	1,268	61	11,381
Bridgewater, N.S.	30	7,810	–	–	30	7,810
Britannia Beach, B.C.	32	10,488	2	786	34	11,274
Campbellton, N.B.	13	4,490	17	26,328	30	30,818
Campobello, N.B.	330	50,214	425	8,908	755	59,122
Canso, N.S.	116	16,630	314	18,163	430	34,793
Charlottetown, P.E.I.	72	72,706	1	654	62	73,360
Chatham, N.B.	9	11,145	14	15,584	23	26,729
Chemainus, B.C.	58	70,447	55	49,492	113	111,939
Digby, N.S.	117	13,135	44	780	161	13,915
Gaspé, Que.	21	7,671	11	12,846	32	20,517
Halifax, N.S.	1,399	2,602,495	482	865,078	1,881	3,467,573
Hantsport, N.S.	20	15,135	10	17,179	30	32,314
Hillsboro, N.B.	28	27,636	19	11,467	47	39,103
Ladysmith, B.C.	1,020	172,985	366	119,863	1,386	292,848
La Have, N.S.	168	23,973	7	490	175	24,463
Levis, Que.	10	25,239	2	6,758	12	31,997
Liverpool, N.S.	155	17,080	322	19,398	477	36,478
Lockport, N.S.	96	3,907	66	2,580	162	6,487
Lord's Cove, N.B.	385	3,055	301	3,954	686	7,009
Louisburg, N.S.	159	80,419	401	23,533	560	103,952
Lower East Pubnico, N.S.	50	2,575	139	4,886	189	7,461
Lunenburg, N.S.	256	58,981	23	2,346	589	61,327
Moncton, N.B.	9	3,265	10	2,596	19	5,861
Montreal, Que.	1,104	3,895,945	451	1,250,050	1,555	5,145,995
Nanaimo, B.C.	343	91,496	1,911	301,374	2,254	392,870
Newcastle, N.B.	15	6,767	5	5,981	20	12,748
New Westminster, B.C.	30	63,464	34	38,543	64	102,047
North Head, N.B.	379	56,765	27	429	406	57,194
North Sydney, N.S.	1,276	387,327	428	173,493	1,704	560,820
Ocean Falls, N.S.	32	56,862	20	25,956	52	82,818
Parrsboro, N.S.	113	24,612	56	15,157	169	39,769
Port Alberni, B.C.	20	28,171	40	44,838	60	73,009
Powell River, B.C.	114	107,587	121	63,134	235	170,721
Port Alfred, Que.	51	99,851	6	12,362	57	112,213
Port Hawkesbury, N.S.	91	12,672	43	11,418	134	24,090
Port Hastings, N.S.	6	4,628	7	7,744	13	12,372
Prince Rupert, B.C.	2,325	145,829	2,944	110,096	5,269	255,925
Quatsino, B.C.	3	982	10	35,481	13	36,463
Quebec, Que.	207	1,120,282	39	100,556	246	1,220,838
Rimouski, Que.	6	7,034	4	5,028	10	12,062
St. Andrew's, N.B.	498	42,618	1,239	24,919	1,737	67,537
St. George, N.B.	32	5,910	169	3,659	201	9,569
St. John, N.B.	688	1,307,692	565	523,722	1,253	1,831,414
St. Martin's, N.B.	35	18,699	59	8,308	94	27,007
St. Stephens, N.B.	78	4,621	151	6,753	229	11,374
Sandy Point, N.S.	20	3,062	354	24,802	374	27,864
Shelburne, N.S.	27	5,544	130	9,436	157	14,980
Sidney, B.C.	47	11,595	75	41,373	122	52,968
Stewart, B.C.	38	21,901	21	5,911	59	27,812
Sydney, N.S.	554	669,959	317	453,544	871	1,123,503
Three Rivers, Que.	10	24,256	13	29,030	23	53,286
Union Bay, B.C.	115	235,559	146	350,335	261	585,894
Vancouver, B.C.	1,965	2,860,333	1,403	2,578,431	3,368	5,438,764
Victoria, B.C.	1,742	2,183,548	1,798	2,476,387	3,540	4,659,935
White Rock, B.C.	177	10,627	28	356	205	10,983
Windsor, N.S.	75	55,853	107	130,538	182	186,391
Yarmouth, N.S.	502	322,110	329	43,182	831	365,292

53.—Sea-going Vessels Entered Inwards and Outwards, by Countries, 1922.

VESSELS ENTERED INWARDS.

Countries whence arrived.	British.			Canadian.			Foreign.		
	No. of Vessels.	Tons Register.	Crew No.	No. of Vessels.	Tons Register.	Crew No.	No. of Vessels.	Tons Register.	Crew No.
Great Britain	739	3,143,509	90,171	168	268,105	4,496	136	362,937	4,854
Australia	32	175,827	5,357	11	37,107	481	1	1,012	14
Gibraltar	7	21,129	232	2	6,683	88	6	15,750	265
British W. Indies	67	158,764	5,836	180	117,076	2,794	19	17,688	427
Newfoundland	673	235,816	11,015	363	131,086	4,973	54	112,342	1,421
Other British possessions	14	50,648	815	10	34,337	446	3	11,936	148
Belgium	52	303,780	10,931	2	9,407	105	16	70,879	1,348
China	16	101,525	1,739	46	282,520	17,633	34	219,068	5,422
Denmark	–	–	–	–	–	–	21	67,455	2,036
France	10	24,519	377	5	13,838	383	28	63,255	1,486
Germany	15	50,743	835	2	7,079	76	21	56,914	805
Holland	41	118,268	1,624	3	10,745	139	47	118,068	1,643
Italy	9	33,148	883	5	15,955	197	35	119,144	2,010
Japan	9	55,519	952	12	47,544	2,141	115	594,859	12,396
Mexico	3	10,219	114	15	94,121	606	28	130,588	694
Norway	2	2,718	40	1	2,155	39	21	48,282	655
Peru	7	20,636	310	4	9,682	116	16	48,933	556
St. Pierre	16	1,604	99	9	657	50	98	22,387	3,076
Philippines	7	45,066	825	1	2,823	50	6	21,636	270
San Domingo	–	–	–	–	–	–	26	32,891	743
Spain	6	17,413	379	10	10,084	174	5	4,991	103
United States	283	770,377	19,216	4,273	2,145,564	96,451	5,178	2,538,660	78,740
Sea Fisheries	104	7,418	1,533	2,113	60,503	13,994	2,711	87,940	25,254
Other countries	22	42,802	713	31	33,442	628	40	74,095	1,435
From Sea	18	16,607	1,190	64	8,317	272	10	15,588	723
Total	**2,152**	**5,408,055**	**155,186**	**7,330**	**3,348,830**	**146,332**	**8,675**	**4,863,298**	**146,824**

VESSELS ENTERED OUTWARDS.

Countries to which departed.	British.			Canadian.			Foreign.		
	No. of Vessels.	Tons Register.	Crew No.	No. of Vessels.	Tons Register.	Crew No.	No. of Vessels.	Tons Register.	Crew No.
Great Britain	613	2,443,541	60,427	134	291,165	4,766	144	381,594	5,204
Australia	49	235,221	6,341	20	68,860	869	5	15,214	222
British Oceania	3	8,949	132	5	16,620	222	3	8,440	138
British South Africa	5	14,712	244	1	3,384	44	1	2,119	20
British West Indies	4	577	51	53	63,534	1,367	19	17,031	428
Newfoundland	681	239,566	10,598	392	145,128	6,903	41	77,158	1,035
British Guiana	27	76,934	2,907	13	15,995	308	–	–	–
Gibraltar	4	8,522	110	–	–	–	15	46,414	677
Other British possessions	5	13,195	233	15	38,126	719	–	–	–
Argentina	4	8,965	156	3	5,730	105	1	1,369	17
Belgium	32	155,652	4,796	3	6,525	130	27	79,961	1,019
China	9	56,144	1,017	49	248,198	12,870	8	31,305	604
Cuba	6	15,306	281	19	20,067	407	27	28,321	641
Denmark	2	4,347	66	–	–	–	41	85,715	1,260
Brazil	1	2,391	47	9	10,393	163	–	–	–
France	13	68,817	2,076	13	22,518	399	30	38,519	1,231
Germany	49	151,489	2,038	4	12,211	168	59	183,744	2,401
Greece	6	12,882	180	–	–	–	2	5,249	73
Holland	44	139,004	1,854	3	11,375	139	57	155,190	2,043
Italy	10	39,544	1,190	–	–	–	37	120,180	1,851
Japan	23	133,172	2,136	39	179,538	8,148	144	763,959	15,488
Mexico	4	10,327	134	15	67,293	451	27	94,077	751
Norway	1	2,261	25	–	–	–	35	76,766	1,051
Peru	8	23,584	358	2	10,676	86	2	5,943	70
St. Pierre	19	2,024	138	18	1,707	121	52	13,486	1,155
United States	309	1,102,633	32,324	4,204	2,138,106	97,299	4,210	2,998,671	79,889
Sea fisheries	121	13,122	2,217	2,360	81,955	16,981	3,477	109,100	33,186
Other countries	13	60,996	1,041	69	52,546	944	22	49,849	712
For Sea	22	19,471	1,421	66	722	178	9	9,163	685
Total	**2,087**	**5,063,348**	**134,538**	**7,599**	**3,512,372**	**153,787**	**8,495**	**5,398,567**	**151,851**

54.—Sea-going Vessels Entered and Cleared at Canadian Ports with Cargo and in Ballast, 1901-1922.

Fiscal Years.	British.		Canadian.		Foreign.		Total Tonnage.
	No.	Tons Register.	No.	Tons Register.	No.	Tons Register.	
1901	4,319	6,694,133	9,910	1,677,138	12,476	6,171,791	14,543,062
1902	4,363	6,865,924	11,413	1,937,227	14,530	5,928,337	14,731,488
1903	4,647	7,753,788	11,282	2,085,568	12,403	6,001,819	15,841,175
1904	4,997	8,045,817	11,045	1,979,803	14,002	5,801,085	15,826,705
1905	4,614	8,034,652	11,279	2,269,834	11,904	5,283,969	15,588,455
1906	5,104	9,059,453	12,201	2,304,942	12,511	5,479,034	16,843,429
1907 (9 mos.)	4,488	7,576,721	7,880	1,899,141	8,107	4,429,012	13,904,874
1908	6,356	10,329,515	10,562	2,606,660	12,886	6,555,096	19,491,271
1909	5,795	10,405,370	10,946	2,806,278	13,441	6,554,228	19,765,876
1910	5,780	11,038,709	10,875	3,498,361	13,147	6,267,243	20,804,313
1911	6,870	12,712,337	10,607	3,341,998	12,467	6,242,851	22,297,186
1912	6,766	13,342,929	10,966	4,618,163	15,134	6,628,513	24,589,605
1913	7,307	13,896,353	11,810	4,530,835	16,549	7,803,910	26,231,098
1914	7,418	15,711,849	12,786	5,160,799	15,811	8,695,838	29,568,486
1915	6,949	13,931,091	11,903	4,005,011	15,060	7,466,484	25,402,586
1916	6,817	12,417,944	12,386	3,894,731	18,559	8,514,975	24,827,650
1917	7,387	16,144,873	12,241	4,343,448	18,500	8,778,753	29,267,074
1918	7,337	16,959,790	10,998	4,343,853	16,597	11,483,484	32,787,127
1919	6,099	14,054,166	11,115	3,758,528	15,132	7,448,699	25,261,393
1920	5,511	12,320,994	11,994	4,434,634	17,353	8,489,126	25,244,754
1921	4,526	10,545,619	12,490	5,510,484	17,624	8,860,626	24,916,729
1922	4,239	10,471,403	14,929	6,861,202	17,170	10,261,865	27,594,470

NOTE.—For 1868-1900, see Canada Year Book, 1911, p. 379.

55.—Sea-going and Inland Vessels (exclusive of Coasting Vessels) arrived at and departed from Canadian Ports, 1901-1922.

Fiscal Years.	British.		Canadian.		Foreign.		Total Tonnage.
	No.	Tons Register.	No.	Tons Register.	No.	Tons Register.	
1901	4,319	6,694,133	30,211	8,540,089	33,302	10,795,586	26,029,808
1902	4,363	6,865,924	33,202	9,654,528	40,148	13,504,952	30,025,404
1903	4,647	7,753,788	31,534	10,482,940	53,545	15,418,315	33,655,043
1904	4,997	8,045,817	30,934	9,955,290	35,739	13,201,098	31,202,205
1905	4,614	8,034,652	29,729	11,047,447	35,647	13,195,721	32,277,820
1906	5,104	9,059,453	32,239	11,241,915	37,644	14 430,804	34,732,172
1907 (9 mos.)	4,488	7,576,721	30,654	11,582,409	25,263	11,436,761	30,595,891
1908	6,356	10,329,515	28,795	11,717,846	40,461	17,527,670	39,575,031
1909	5,795	10,405,370	29,247	13,805,790	38,677	16,490,443	40,701,603
1910	5,780	11,038,709	28,635	15,680,534	41,650	17,848,748	44,567,991
1911	6,870	12,712,337	29,670	16,380,146	40,892	18,337,062	47,429,545
1912	6,766	13,342,929	27,949	18,069,983	45,399	21,560,215	52,973,127
1913	7,307	13,896,353	42,624	20,677,938	47,303	23,275,492	57,849,783
1914	7,418	15,711,849	30,234	17,026,121	55,835	29,181,513	61,919,483
1915	6,949	13,931,091	29,359	17,504,751	48,635	22,168,311	53,604,153
1916	6,817	12,417,944	37,900	17,372,836	75,411	27,930,318	57,721,098
1917	7,387	16,144,873	39,978	20,290,252	74,850	29,277,419	65,712,544
1918	7,337	16,959,790	34,786	19,890,461	70,781	29,952,237	66,802,488
1919	6,099	14,054,166	37,023	17,567,061	52,273	21,607,821	53,229,048
1920	5,511	12,320,994	37,388	16,869,619	52,827	20,302,920	49,493,533
1921	4,526	10,545,619	39,877	22,236,962	50,370	21,866,049	54,648,630
1922	4,239	10,471,403	36,679	20,029,572	61,114	26,164,278	56,665,253

NOTE.—For 1868-1900, see Canada Year Book, 1911, p. 380.

56.—British and Foreign Vessels employed in the Coasting Trade of Canada, 1918-1922.

	1918.	1919.	1920.	1921.	1922.
VESSELS ARRIVED—					
British—					
Steam.....No.	63,586	59,076	61,859	61,187	62,646
Tons register.....	28,208,601	24,666,439	27,711,784	25,294,751	27,513,247
Number of crew.....	1,210,763	1,129,514	1,209,243	1,207,878	1,249,902
Sail.....No.	14,945	13,552	13,143	12,505	12,492
Tons register.....	3,082,450	2,868,481	2,785,198	2,790,484	3,165,990
Number of crew.....	54,663	49,230	48,798	51,958	49,517
Foreign—					
Steam.....No.	479	701	594	680	425
Tons register.....	681,724	756,161	521,771	428,017	382,632
Number of crew.....	11,515	16,310	12,381	11,092	9,184
Sail.....No.	296	343	204	160	147
Tons register.....	43,914	116,790	50,099	54,293	38,287
Number of crew.....	1,871	2,027	1,227	1,054	1,025
Description of vessels—					
Steam, screw.....No.	58,745	54,465	56,922	56,095	57,753
Steam, paddle..... "	4,088	3,841	3,737	4,043	3,809
Steam, sternwheel..... "	1,232	1,471	1,794	1,729	1,569
Sail, ships..... "	–	1	3	7	–
Sail, barks..... "	1	2	3	2	3
Sail, barkentines..... "	1	1	2	4	1
Sail, brigantines..... "	–	2	–	3	3
Sail, schooners..... "	11,733	10,031	9,625	8,810	8,329
Sail, sloops, barges, canal boats, etc..... "	3,506	3,858	3,714	3,839	4,303
VESSELS DEPARTED—					
British—					
Steam.....No.	60,750	56,407	59,004	59,794	59,002
Tons register.....	26,033,657	22,652,010	26,414,821	24,793,946	27,418,694
Number of crew.....	1,160,981	1,083,012	1,153,433	1,191,554	1,227,953
Sail.....No.	15,217	15,221	12,859	11,944	12,152
Tons register.....	2,910,028	2,781,176	2,660,725	2,578,804	3,029,708
Number of crew.....	56,502	47,844	46,155	49,892	49,683
Foreign—					
Steam.....No.	354	558	454	566	443
Tons register.....	457,605	543,600	350,310	351,522	240,034
Number of crew.....	7,846	10,813	8,624	8,697	7,158
Sail.....No.	311	266	262	152	128
Tons register.....	44,621	118,668	57,950	49,396	38,497
Number of crew.....	1,613	2,442	1,400	731	728
Description of Vessels—					
Steam, screw.....No.	55,928	51,994	54,334	54,481	54,096
Steam, paddle..... "	3,948	3,486	3,323	4,251	3,778
Steam, sternwheel..... "	1,228	1,485	1,801	1,628	1,571
Sail, ships..... "	–	1	1	2	–
Sail, barks..... "	1	2	6	5	2
Sail, barkentines..... "	–	1	2	1	3
Sail, brigantines..... "	2	1	–	5	3
Sail, schooners..... "	12,050	11,787	9,465	8,638	8,207
Sail, sloops, barges, canal boats, etc. "	3,475	3,695	3,647	3,445	4,065

Inland Shipping.—Inland shipping is associated in its beginnings with the birch-bark canoe of the American Indian. The advantages of this light and easily navigable boat were realized by explorers and fur traders, and for many years it was in general use, giving way to more substantial craft only with the demands of heavier traffic. The bateau and Durham boat came into common use after the migration of the U.E. Loyalists, and, on the St. Lawrence and the other main highways of the time, they too soon gave place to larger vessels. Original plans of the Lachine Canal, by which it was to be 12 feet in width and 18 inches deep, afford an illustration of the size of these primitive craft.

In the absence of any roads making land travel possible, the St. Lawrence river and the Great Lakes formed the main highway to the interior.

The route from Montreal to the Upper Lakes was broken at three places—from Montreal to Kingston transportation was by bateau or Durham boat, from Kingston to Queenston schooners were used, then there was the portage road from Queenston to Chippawa and finally schooner again to the destination. The charge for transporting a barrel of rum from Montreal to Kingston was from $3.00 to $3.50, and freight charges on other goods were proportions of the rate on this standard article.

In 1809, the "Accommodation," the first Canadian steamship, was built for the Hon. John Molson to run between Montreal and Quebec. By 1818 Molson formed a company, the St. Lawrence Steamship Company or the Molson Line. On lake Ontario, the "Frontenac," beginning with 1817, was used on a weekly service between York and Prescott, and following this beginning came a period of great activity in lake and river shipping. In 1845, the "Gore" reached lake Huron by way of the Welland canal to carry on transport trade in the Upper Lakes, where previously there had not been enough traffic to support a large ship. Shipping on the Upper Lakes became brisker now, for there were settlers to be carried from Buffalo to the western United States and grain to be brought back. In this period Canadian shipping made its profit by carrying American goods, for there was little traffic originating in the Canadian near-West.

The period from 1850 to the present has witnessed a general decline in inland shipping owing to the competition of railways. Considerable traffic is still carried over water routes, however, and the transport of grain, coal and iron ore now forms the basis of considerable fleets of cargo boats on the Great Lakes.

57.—Canadian and American Vessels trading on Rivers and Lakes between Canada and United States, exclusive of ferriage, 1918-1922.

	1918.	1919.	1920.	1921.	1922.
VESSELS ARRIVED—					
Canadian—					
Steam.....No.	10,292	11,774	11,587	12,420	10,110
Tons register.....	7,326,058	6,664,144	5,883,911	7,884,184	6,283,053
Number of crew.....	275,804	207,523	235,405	288,117	276,557
Sail.....No.	1,518	1,087	967	1,298	712
Tons register.....	418,482	416,124	269,908	404,180	181,534
Number of crew.....	5,475	5,132	3,653	4,917	3,086
American—					
Steam.....No.	24,594	16,325	16,499	14,089	20,792
Tons register.....	8,643,144	6,708,059	5,611,030	6,059,357	7,546,477
Number of crew.....	264,221	180,420	191,569	169,904	198,725
Sail.....No.	2,196	2,034	1,147	1,550	1,025
Tons register.....	661,297	521,317	319,415	480,733	348,158
Number of crew.....	7,348	6,589	3,912	6,366	3,878
Description of Vessels—					
Steam, screw.....No.	32,923	26,992	26,664	25,118	29,741
Steam, paddle..... "	1,911	1,031	1,384	1,359	1,140
Steam, sternwheel..... "	52	76	38	32	21
Sail, schooners..... "	1,063	729	642	809	251
Sail, sloops..... "	21	17	11	13	33
Sail, barges..... "	1,970	2,375	1,461	2,026	1,453
Sail, barks..... "	660	–	–	–	–
VESSELS DEPARTED—					
Canadian—					
Steam.....No.	10,454	11,896	11,847	12,384	10,292
Tons register.....	7,351,692	6,320,430	5,976,120	8,046,127	6,533,006
Number of crew.....	223,094	217,673	236,263	261,338	240,272
Sail.....No.	1,524	1,151	993	1,285	636
Tons register.....	450,376	407,835	305,046	391,987	170,777
Number of crew.....	5,574	5,009	3,963	5,186	3,065
American—					
Steam.....No.	24,419	16,160	16,249	15,140	20,819
Tons register.....	8,417,326	6,385,048	5,532,881	5,947,482	7,653,349
Number of crew.....	270,472	178,345	184,109	169,675	199,306
Sail.....No.	2,975	2,622	1,579	1,967	1,308
Tons register.....	746,986	544,698	350,468	517,851	354,429
Number of crew.....	8,426	7,610	5,150	6,398	4,320
Description of Vessels—					
Steam, screw.....No.	32,901	26,983	26,672	26,384	29,914
Steam, paddle..... "	1,697	1,027	1,386	1,097	1,180
Steam, sternwheel..... "	275	46	38	43	17
Sail, schooners..... "	869	716	677	536	264
Sail, sloops..... "	22	22	10	16	37
Sail, barges..... "	3,608	3,035	1,885	2,700	1,643

58.—Statement showing by Provinces the total number and tonnage of all Vessels entered and cleared at Canadian Ports during the fiscal year ended March 31, 1922.

Provinces.	Sea-going.				Coastwise.			
	Arrived.		Departed.		Arrived.		Departed.	
	Vessels.	Tons register.	Vessels.	Tons register.	Vessels.	Tons register.	Vessels.	Tons register.
Nova Scotia	4,886	2,945,193	5,252	3,339,237	20,505	3,321,240	20,415	2,902,593
Prince Edward Island	65	35,975	69	43,109	1,614	219,567	1,606	211,734
New Brunswick	3,176	1,192,440	2,688	1,025,510	3,693	506,654	3,901	668,517
Quebec	1,041	3,596,436	970	3,022,399	7,279	5,369,978	7,371	5,985,213
Ontario	–	–	–	–	13,961	10,837,504	11,732	10,284,735
Manitoba	2	1,570	1	1,498	–	–	–	–
British Columbia	8,987	5,848,569	9,201	6,542,534	28,466	10,731,969	26,484	10,563,957
Yukon	–	–	–	–	252	113,244	216	110,184
Grand Total	**18,157**	**13,620,183**	**18,181**	**13,974,287**	**75,770**	**31,100,156**	**71,725**	**30,726,933**

Provinces.	Rivers and Lakes.				Total.			
	Arrived.		Departed.		Arrived.		Departed.	
	Vessels.	Tons register.	Vessels.	Tons register.	Vessels.	Tons register.	Vessels.	Tons register.
Nova Scotia	–	–	–	–	25,391	6,266,433	25,667	6,241,830
Prince Edward Island	–	–	–	–	1,679	255,542	1,675	254,843
New Brunswick	–	–	–	–	6,869	1,699,094	6,589	1,694,027
Quebec	1,692	785,045	2,159	1,004,757	10,012	9,751,459	10,500	10,012,369
Ontario	30,882	13,553,688	30,838	13,690,837	44,843	24,391,192	42,570	23,975,572
Manitoba	–	–	–	–	2	1,570	1	1,498
British Columbia	22	240	20	214	37,475	16,580,778	35,705	17,106,705
Yukon	43	20,249	38	15,753	295	133,493	254	125,937
Grand Total	**32,639**	**14,359,222**	**33,055**	**14,711,561**	**126,566**	**59,079,561**	**122,961**	**59,412,781**

59.—Vessels built and registered in Canada and Vessels sold to other Countries, fiscal years 1901-1922.

Fiscal Years.	Built.		Registered.		Sold to other Countries.		
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	Value.
							$
1901	240	21,956	327	35,156	5	4,490	66,468
1902	260	28,288	316	34,236	27	11,360	235,865
1903	295	30,856	312	41,405	21	11,172	220,602
1904	214	28,397	243	33,192	11	7,208	87,115
1905	248	21,865	335	27,583	21	3,696	100,363
1906	323	18,724	420	37,639	45	9,487	187,725
1907 (9 months)	229	33,205	257	31,635	17	3,855	68,190
1908	361	49,928	357	78,144	28	4,515	132,500
1909	303	29,023	277	32,899	16	3,644	98,643
1910	264	24,059	220	33,383	14	5,047	133,800
1911	247	22,812	234	50,006	17	5,885	201,526
1912	326	31,065	302	30,021	18	4,265	140,350
1913	324	24,325	328	30,225	20	7,976	610,650
1914	289	46,887	230	46,909	27	8,258	169,618
1915	224	45,721	237	55,384	21	17,044	1,150,950
1916	167	13,497	325	102,239	21	4,529	192,575
1917	184	28,638	334	105,826	47	24,954	4,398,570
1918	216	53,912	336	70,350	63	25,252	5,330,850
1919	277	104,444	327	102,883	85	48,965	14,612,338
1920	352	164,074	459	237,022	68	53,407	17,819,477
1921	220	95,838	323	188,915	69	34,623	8,456,573
1922	143	78,409	228	131,732	35	25,462	3,399,450

NOTE.—For 1874–1900, see Canada Year Book, 1911, p. 383.

60.—Number and net Tonnage of Vessels on the Registry of Shipping of Canada, by Provinces, calendar years 1912-1921.

Provinces.	1912.		1913.		1914.		1915.		1916.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
P. E. Island.....	148	9,577	149	10,071	149	10,029	158	11,518	155	10,652
Nova Scotia.....	2,158	143,295	2,106	138,107	2,098	135,053	2,087	125,567	2,064	123,058
New Brunswick.	1,001	57,369	1,031	60,020	1,052	55,522	1,068	56,219	1,074	49,817
Quebec.....	1,566	227,048	1,628	247,225	1,663	259,143	1,590	267,897	1,452	273,770
Ontario.....	2,017	253,376	2,012	279,642	2,100	314,660	2,111	312,971	2,116	328,531
Manitoba.....	95	6,096	93	5,545	103	7,999	84	7,480	95	8,953
Saskatchewan....	5	356	5	356	5	529	5	530	5	530
British Columbia	1,376	136,618	1,506	153,059	1,591	147,192	1,643	144,835	1,687	145,525
Yukon Territory.	14	2,543	15	2,940	11	2,295	11	2,295	11	2,295
Total.....	**8,380**	**836,278**	**8,545**	**896,965**	**8,772**	**932,422**	**8,757**	**929,312**	**8,659**	**943,131**

Provinces.	1917.		1918.		1919.		1920.		1921.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
P. E. Island.....	157	10,955	158	10,805	158	10,726	143	9,993	137	9,560
Nova Scotia.....	2,010	119,805	1,948	124,517	1,965	158,100	1,709	152,130	1,550	153,461
New Brunswick.	1,074	49,883	1,043	49,483	1,018	42,050	917	38,634	859	40,456
Quebec.....	1,391	283,942	1,318	275,235	1,340	342,424	1,321	409,442	1,252	449,817
Ontario.....	2,079	311,283	2,064	312,865	1,986	320,065	1,793	313,875	1,681	306,944
Manitoba.....	99	9,834	96	9,791	89	9,160	83	9,119	86	9,599
Saskatchewan....	5	530	5	529	5	529	4	393	5	447
British Columbia	1,734	183,002	1,928	231,513	2,006	207,708	1,930	217,481	1,908	252,876
Yukon Territory.	10	2,204	8	2,040	6	1,133	4	813	4	813
Total.....	**8,559**	**971,438**	**8,568**	**1,016,778**	**8,573**	**1,091,895**	**7,904**	**1,151,880**	**7,482**	**1,223,973**

The Department of Marine and Fisheries.—Administration of the general shipping interests of Canada is in the hands of the Department of Marine and Fisheries. Its more important functions include (1) administration of the Canada Shipping Act and other Acts of the Dominion Government relating to marine transportation; (2) pilotage; (3) the construction and maintenance of lighthouses, lightships, fog alarms, buoys and beacons; (4) ports, harbours, piers, wharves and breakwaters ; (5) the Meteorological Service of Canada; (6) sick and distressed seamen, and the establishment, regulation and management of marine and seamen's hospitals; (7) river and harbour police; (8) inquiries into the causes of shipwrecks and casualties and the collection of wreck statistics; (9) the inspection of steamboats; (10) the construction and maintenance of the St. Lawrence River Ship Canal and (11) the maintenance of winter communication between Prince Edward Island and the mainland. The net revenue of the department for the fiscal years ended March 31, 1921 and 1922, was $396,617 and $701,497 respectively, and the expenditure for the same periods was $26,038,902 and $20,419,883, as compared with $38,301,080 in the fiscal year ended March 31, 1920.

61.—Revenue of the Department of Marine, fiscal years 1917-1922.

Heads of Revenue.	1917.	1918.	1919.	1920.	1921.	1922.
	$	$	$	$	$	$
Harbours, piers and wharves	86,110	95,259	76,760	71,210	106,047	79,492
Earnings of Dominion steamers	22,802	9,581	13,621	13,181	4,051	269
Decayed pilots' fund	5,230	5,316	5,605	5,304	7,281	8,417
Steamboat inspection fund	2,618	1,589	1,486	3,049	73,306	117,819
Steamboat engineers' fees	1,419	1,204	1,288	1,545	–	–
Sick mariners' fund	76,994	63,636	69,244	46,314	–	–
Examination, masters and mates	4,600	4,486	3,274	3,863	4,232	3,269
Casual revenue, sundries	373,314	46,225	224,547	112,965	123,895	373,727
St. John pilotage dues	–	–	–	–	25,892	43,197
St. John superannuation	–	–	–	–	–	6,841
Halifax pilotage dues	–	–	–	–	47,447	60,486
Halifax pilots' general account	–	–	–	4,261	–	–
Halifax pilots' pension fund	–	–	–	4,664	1,527	–
Halifax superannuation	–	–	–	–	–	4,113
British Columbia, pilotage revenue	–	–	–	34,521	–	–
Miscellaneous	1,411	1,516	954	2,125	2,939	3,867
Total revenue	**574,498**	**228,812**	**396,779**	**303,002**	**396,617**	**701,497**

62.—Expenditure of the Department of Marine, fiscal years 1917-1922.

Heads of Expenditure.	1917.	1918.	1919.	1920.	1921.	1922.
	$	$	$	$	$	$
Ocean and River Service—						
Boilers for SS. "Montcalm"	–	–	–	37,750	–	–
Life-saving service	–	–	–	–	59,685	66,325
Motor patrol in B.C.	–	–	–	–	69,121	[1]
Repairing the "Aranmore"	–	–	–	–	76,217	–
Dominion steamers and icebreakers	1,035,251	1,108,539	1,193,371	1,447,842	1,799,421	1,510,159
Two steamers for Maritime Provinces	–	–	102,656	–	–	–
Wrecking plants (subsidy)	37,500	42,500	35,000	35,000	35,000	35,000
Other items of expenditure	33,042	41,635	33,822	37,910	42,171	72,905
Total	**1,105,793**	**1,192,674**	**1,364,849**	**1,558,502**	**2,081,615**	**1,684,389**
Lighthouse and Coast Service—						
Agencies, rent and contingencies	150,437	165,967	171,270	177,146	188,475	190,953
Administration of pilotage	44,436	52,068	91,077	103,913	120,040	92,128
Salaries and allowances to lightkeepers	462,407	464,091	519,103	599,979	644,768	649,299
Maintenance and repairs to lighthouses, etc.	652,591	700,707	668,050	751,953	786,389	794,954
Construction of lighthouses, etc.	331,222	357,543	349,291	357,853	398,146	399,982
Breaking of ice	34,150	25,141	39,515	40,000	40,000	56,000
Motor patrol in B.C.	–	–	–	–	–	5,879
Signal service	51,859	53,254	54,236	59,840	68,735	74,848
Other items of expenditure	42,187	41,538	18,705	29,321	16,565	16,723
Total	**1,769,289**	**1,860,309**	**1,911,247**	**2,120,005**	**2,263,118**	**2,280,766**
Public Works, chargeable to Capital—						
Ship Channel, River St. Lawrence	1,084,770	656,422	425,333	484,186	507,212	567,371
Dredging plant, River St. Lawrence, Montreal to Father Point	261,221	94,537	70,913	65,964	–	–
Shipbuilding	–	–	–	33,014,390	19,994,514	5,592,703
Award, Estate D. J. McCarthy	–	–	–	3,228	–	–
Allowance to Mrs. I. Pinard	1,000	–	–	–	–	–
Six salt water tugs	–	–	46,528	–	–	–
New icebreaker	–	–	–	–	972	457,657
Sorel Shipyard	–	–	–	–	100,414	47,248
Total	**1,346,991**	**750,959**	**542,774**	**33,567,768**	**20,603,112**	**6,664,979**
Scientific Institutions—						
Meteorological Service—						
Total	**193,886**	**193,237**	**188,188**	**200,734**	**208,592**	**251,896**

[1] Now under Lighthouse and Coast Service.

62.—Expenditure of the Department of Marine, fiscal years 1917-1922.—concluded.

Heads of Expenditure.	1917.	1918.	1919.	1920.	1921.	1922.
	$	$	$	$	$	$
Compassionate allowance to dependants of SS. "Simcoe"	–	–	61,500	–	–	–
Honorarium to T. J. Rowan	–	–	350	–	–	–
Marine Hospitals, etc	66,818	53,169	74,291	48,562	–	–
Steamboat inspection	67,560	70,381	72,874	82,633	97,704	103,670
Departmental salaries	194,778	211,148	212,390	222,399	231,810	268,380
Contingencies	23,669	29,621	30,702	36,140	58,671	48,713
Bonus	–	–	–	461,512	234,448	270,221
Gratuities	–	–	–	2,825	3,264	2,507
Steel purchase	–	–	–	–	189,720	–
Classification arrears	–	–	–	–	65,998	35,783
Retirement Act	–	–	–	–	850	–
Superannuation No. 4	–	–	–	–	–	11,050
Exchequer Court Awards	–	–	–	–	–	83,143
Governor General Warrants		–	–	–	–	70,838
Montreal Harbour Commission		–	–	–	–	2,303,000
Quebec " "	–	–	–	–	–	14,600
Vancouver " "	–	–	–	–	–	1,581,000
Imperial Government	–	–	–	–	–	13,008
Victoria, B.C., Shipowners	–	–	–	–	–	39,476
Demobilization	–	–	–	–	–	4,609,321
Consolidated revenue	–	–	–	–	–	83,143
Total expenditure	**4,768,784**	**4,361,498**	**4,459,165**	**38,301,080**	**26,038,902**	**20,419,883**

63.—Total Revenue and Expenditure of the Department of Marine, fiscal years 1868-1922.

Years.	Revenue.	Expenditure.	Years.	Revenue.	Expenditure.	Years.	Revenue.	Expenditure.
	$	$		$	$		$	$
1868	71,811	371,071	1886	91,885	980,121	1904	128,507	2,150,940
1869	75,351	360,900	1887	102,238	917,557	1905	121,815	4,747,723
1870	71,420	367,189	1888	99,920	883,251	1906	139,475	5,066,253
1871	70,254	389,537	1889	99,940	1,023,201	1907[1]	106,260	3,637,600
1872	79,324	518,958	1890	115,507	807,417	1908	177,591	5,374,774
1873	114,756	706,818	1891	104,248	885,410	1909	169,502	5,498,531
1874	108,350	845,151	1892	106,582	861,427	1910	156,957	4,692,771
1875	91,235	844,586	1893	107,390	898,720	1911	154,492	4,197,420
1876	107,984	970,146	1894	165,870	905,654	1912	185,579	4,911,141
1877	105,907	820,054	1895	99,557	895,828	1913	185,725	5,213,223
1878	100,850	786,156	1896	103,012	753,634	1914	217,034	5,828,027
1879	84,144	755,359	1897	111,009	867,773	1915	795,550[2]	6,202,908
1880	91,942	723,391	1898	120,602	856,192	1916	461,457	5,621,611
1881	108,304	761,731	1999	126,528	1,102,602	1917	574,498	4,768,784
1882	109,125	774,832	1900	130,229	982,562	1918	228,812	4,361,498
1883	104,383	825,011	1901	144,919	1,029,925	1919	396,779	4,459,165
1884	118,080	927,242	1902	148,607	1,501,619	1920	303,002	38,301,080
1885	101,268	1,129,901	1903	139,876	1,671,495	1921	396,617	26,038,902
						1922	701,497	20,419,883

[1] Nine months. [2] Includes $493,000, sale of steamer "Earl Grey", sold to Russian Government.

Steamboat Inspection.—The Steamboat Inspection Service of Canada, maintained under the authority of the Marine and Fisheries Department, comprises the Board of Steamboat Inspection, together with staffs of inspectors at the principal ocean and inland ports. The Board decides on the standards to be required of all vessels coming under their jurisdiction, which must be attained by all ships given official warrant as to their seaworthiness and mechanical condition. Besides, the Board grants certificates of competency to engineers of steamboats.

A table showing the number and tonnage of steamboats inspected during the fiscal year ended 1922 follows:—

64.—Steamboat Inspection during the fiscal year 1921-1922.

Divisions.	Number of Vessels Inspected.				Number of Vessels not Inspected.	
	Vessels registered or owned in the Dominion.		Vessels registered or owned elsewhere.			
	No.	Gross Tonnage.	No.	Gross Tonnage.	No.	Gross Tonnage.
Halifax	158	120,970	15	28,499	19	7,935
St. John	95	92,102	2	4,108	74	66,931
Quebec	125	171,825	2	2,115	14	19,050
Sorel	92	47,382	–	–	33	12,859
Montreal	197	242,021	12	39,034	75	20,165
Kingston	90	45,395	10	9,327	45	12,337
Toronto	295	238,686	57	39,998	44	8,969
Collingwood	91	28,066	–	–	15	742
Port Arthur	77	13,604	1	681	68	8,222
Edmonton	51	8,105	–	–	28	2,464
Vancouver	229	182,266	5	31,512	37	6,444
Victoria	120	103,260	18	113,166	19	4,511
Total	**1,620**	**1,293,682**	**122**	**268,440**	**471**	**170,629**

Divisions.	Number of Vessels subject to Inspection when in Commission.		Number of Vessels added to the Dominion register.		Number of Vessels lost, broken up or destroyed.	
Halifax	192	157,404	16	37,827	14	6,021
St. John	171	163,141	3	37,027	4	219
Quebec	141	192,990	11	11,543	5	4,243
Sorel	125	60,241	10	6,262	10	5,178
Montreal	284	301,220	6	15,408	4	6,945
Kingston	145	67,059	7	2,878	3	2,057
Toronto	396	287,653	6	9,132	3	321
Collingwood	106	28,808	5	210	6	179
Port Arthur	146	22,507	4	8,521	4	2,388
Edmonton	79	10,569	5	138	–	–
Vancouver	271	220,222	12	36,082	4	422
Victoria	157	220,937	11	20,387	3	6,460
Total	**2,213**	**1,732,751**	**96**	**185,415**	**60**	**34,433**

Fees collected during the year on account of inspections totalled $119,767, and those on account of examinations of engineers amounted to $1,813, giving a combined total revenue collected by inspectors of $121,580.

Seamen Shipped and Discharged.—Table 65 shows, for each year from 1908 to 1921, the number of seamen shipped and discharged at Canadian ports under the provisions of the Canada Shipping Act (R.S. 1906, c. 113, ss. 141-143).

65.—Number of Seamen Shipped and Discharged at Canadian Ports, calendar years 1908-1921.

Years.	Seamen Shipped.	Seamen Discharged.	Years.	Seamen Shipped.	Seamen Discharged.
1908	18,013	11,542	1915	22,797	14,319
1909	20,502	11,573	1916	20,902	16,689
1910	16,735	11,069	1917	16,998	14,145
1911	13,748	11,301	1918	16,516	12,930
1912	13,708	11,290	1919	18,208	13,649
1913	16,975	13,749	1920	22,569	19,719
1914	18,987	14,989	1921	18,444	17,103

Wrecks and Casualties.—The statement in Table 66, supplied by the Department of Marine, applies to vessels of every nationality in respect of wrecks and casualties in Canadian waters, and to Canadian vessels in respect of wrecks and casualties in other waters. The returns in some years cover wrecks and casualties of previous years.

66.—Canadian Wrecks and Casualties for 1870-1900, for the years ended June 30, 1901-1917, and for the calendar years 1918-1921.

Years.	Casualties.	Net tonnage.	Lives lost.	Stated damages.	Years.	Casualties.	Net tonnage.	Lives lost.	Stated damages.
	No.	Tons.	No.	$		No.	Tons.	No.	$
1870-1900	9,670	3,577,367	5,096	61,525,760	1912	293	269,569	59	1,053,768
1901	136	47,181	126	285,782	1913	275	270,905	160	1,963,870
1902	222	105,814	132	835,916	1914	255	210,368	1,083[1]	4,983,775
1903	237	162,297	32	409,991	1915	280	214,036	70	1,459,012
1904	192	81,143	9	489,699	1916	308	242,996	67	1,377,442
1905	178	79,588	15	621,267	1917	239	715,384	152	4,850,145[2]
1906	220	139,586	149	573,420	1918	226	312,928	402[3]	1,818,895
1907	317	131,441	55	672,466	1919	240	205,720	100	1,808,690
1908	307	120,269	34	1,390,891	1920	227	222,928	28	1,643,825
1909	343	189,906	24	1,131,966	1921	260	588,503	38	1,809,328
1910	321	211,565	101	1,569,580					
1911	271	122,619	48	942,093	**Totals**	**15,017**	**8,222,113**	**7,980**	**93,217,581**

NOTE.—For the years 1870-1900, see Canada Year Book, 1911, p. 381.
[1] Includes 1,042 lives lost in the "Empress of Ireland" disaster. [2]Excluding damage to cargo estimated at $4,310,350. [3]Includes 328 lives lost in the "Princess Sophia" disaster.

67.—Comparative Statement of Marine Danger Signals, fiscal years 1912-1922.

Description.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Lights	1,452	1,393	1,461	1,521	1,555	1,560	1,575	1,577	1,578	1,598	1,602
Light ships	12	12	12	12	12	12	9	9	10	9	9
Light boats	1	1	1	1	1	1	1	1	1	–	–
Light keepers	975	1,020	1,040	1,066	1,099	1,126	1,128	1,122	1,120	1,130	1,118
Fog whistles	13	14	13	11	11	11	11	10	9	8	8
Sirens	2	2	2	2	2	2	2	2	1	1	1
Diaphones	83	89	98	105	110	113	124	128	131	134	135
Fog bells	29	26	26	29	31	32	30	29	32	33	35
Hand fog horns	137	145	150	148	151	156	154	156	149	148	148
Hand fog bells	2	3	3	3	3	3	5	5	4	4	4
Gas and whistling buoys	281	299	319	336	327	330	334	339	336	343	345
Whistling buoys	27	29	30	31	31	32	32	31	31	30	29
Bell buoys	65	71	82	86	89	87	87	86	89	90	90
Submarine bells	10	10	13	21	22	22	18	15	12	11	7
Fog guns and bombs	9	9	9	9	8	8	8	6	7	7	7
Fog horns	14	11	12	10	7	5	3	3	1	1	1
Fog alarm stations	9	12	11	12	13	13	13	12	13	13	13

NOTE.—Besides the foregoing, in 1922 there were 47 lighted spar-buoys, floats and dolphins, 5,091 unlighted buoys and 530 unlighted tripods, floats, dolphins, spindles and beacons.

Canadian Government Merchant Marine.

During the closing years of the war, the Dominion Government, realizing the need for a mercantile fleet, not only as a means of developing Canada's export trade but also as a means of assisting our national railways and of providing employment, placed orders with Canadian shipbuilding firms for the construction of 63 steel cargo vessels of 6 different types. These vessels were intended primarily to co-operate with British shipping in supplying the necessities of war, as well as to provide in times of peace the means of carrying abroad the products of Canada's farms, forests, mines and factories, without which Canada could not hope to take full advantage of the opportunity of expanding her export trade. Prior to Dec. 31, 1919, 19 vessels had been delivered by the builders. Additions were made to the fleet in following years until the total fleet, as at December 31, 1922, numbered 64 vessels of a total deadweight tonnage of 378,237. In regard to ownership and operation, a separate company has been organized for each vessel, and the capital stock of each is owned by the Canadian Government Merchant Marine, Limited. Under an operating agreement with each of these companies, the Canadian Government Merchant Marine, Limited, operates all the steamers and keeps a separate account for each company. Promissory notes have been given to the Minister of Finance and Receiver-General for the total capital stock of each vessel, with interest payable at 5½ p.c. per annum.

Early operations proved profitable, and a surplus of $1,004,233, (without provision for interest charges), is shown for the year ended December 31, 1920. The two subsequent years, however, have shown the effects of the depression in the shipping industry, and annual deficits of $9,116,144 and $9,649,479 are shown for 1921 and 1922 respectively. As a result, the Board of Directors has proposed the reduction of the number of vessels to 37 (only the larger, speedier, and specialized ships to be retained), the reduction of capital cost (about $72,500,000) to what may be considered present replacement value (about $18,900,000), and that interest due the government be payable for each year only if earned after allowing for depreciation, such remission of interest to be applicable for a period of five years. While the financial showing of the venture is an unsatisfactory one, the directors, in their last annual report, point out in explanation the falling off in cargo tonnage available and the lower earnings from the carriage of lower priced commodities. It is also noted that much traffic which would otherwise have undoubtedly been handled through private channels, was passed on to the government-owned railways.

During 1922 a total of 235 voyages were made, the majority being to the United Kingdom and the European Continent, to the West Indies, Newfoundland, Australia, California and the Orient, and a few to Mediterranean ports and to India. On December 31, 1922, 32 vessels were employed on the more important trade routes, 4 in coastwise trade, 10 on the Great Lakes as grain carriers, while 18 were laid up in various ports in Canada.

Offices of the company outside of Canada are located in London, in the West Indies, in Australia, in New Zealand and in Newfoundland, while agencies give the company representation in all the principal shipping centres of the world.

X.—TELEGRAPHS.

Canada's first telegraph line was erected in 1847 between Toronto, Hamilton, St. Catharines and Niagara. In the same year the Montreal Telegraph Co. was organized, and a line built from Quebec to Montreal and Toronto. At the close of

the year, the Montreal Telegraph Co., having absorbed the original one, had 540 miles of wire in use, 9 offices, 35 employees, and had sent out 33,000 messages. Equipment of very high quality was used by the early companies.

Development of new companies was rapid, new lines radiating from Montreal in all directions. The Grand Trunk Telegraph Co., with a line from Quebec to Buffalo, offered considerable opposition to the Montreal Co., and soon a combination of the two with the Great North Western Telegraph Co. was formed. This company controlled telegraph service in Canada until the building of the C.P.R. While private companies extended their service to meet the requirements of the more densely populated areas of the country, the Canadian Government built and operated lines in many other districts, principally outlying communities.

Telegraph Systems.—The Canadian telegraph systems are composed of lines owned by the Dominion Government and by chartered railway and telegraph companies. The Government system includes, besides the lines originally constructed by the Government, those previously owned by the Great North Western Telegraph Co., the Grand Trunk Pacific Telegraph Co., the Canadian Northern Railway Co., and the National Transcontinental Railway. The system is now operated by the Canadian National Telegraph Co. (formerly Great Northwestern Telegraph Co.).

The Canadian system, in proportion to population, is one of the most extensive in the world, and is operated under considerable climatic and geographic disadvantages. In the operation of railways and in the receipt and despatch of market and press reports its services to the nation are invaluable.

Telegraph Statistics.—A brief summary table giving the more important figures of the operation of Canadian telegraphs in 1920 and 1921 follows.

68.—Summary Statistics of all Canadian Telegraphs, for calendar years 1920 and 1921.

Items.		Year Ended Dec. 31.	
		1920.	1921.
Gross Revenue	$	11,337,428	11,310,989
Operating Expenses	$	9,589,982	9,734,299
Net Operating Revenue	$	1,747,446	1,576,690
Pole Line Mileage	Miles	52,393	52,828
Wire Mileage	"	238,866	250,802
Employees	No.	7,508	7,818
Number of Offices	"	4,825	4,901
Messages, Land	"	15,589,711	15,013,993
Cablegrams	"	1,162,204	1,154,787
Amount of Money transferred	$	7,045,661	5,150,916

Table 69 gives figures of telegraph operation and line and wire mileage of the various companies for the years 1919 to 1921.

69.—Telegraph Statistics of Chartered Companies, June 30, 1919, and for the calendar years 1919-1921.

Companies.	Year.	Miles of line.	Miles of wire.	Number of messages.[1]	Number of offices.
Canadian National Telegraph Co. (formerly Great Northwestern Telegraph Co.)	1919	16,521	49,893	5,768,216	1,518
	1919	18,420	56,481	6,400,476	1,522
	1920	19,687	72,126	7,340,585	1,576
	1921	20,361	81,266	8,059,150	1,618
Canadian Pacific Railway Co.	1919	14,395	109,153	5,369,074[3]	1,523
	1919	15,061	114,796	5,764,834[3]	1,582
	1920	14,412	121,002	6,290,074[3]	1,587
	1921	14,419	122,414	5,823,303[3]	1,559
Western Union	1919	3,660	15,000	758,682	225
	1919	3,631	15,103	801,709	225
	1920	3,638	16,789	757,067	225
	1921	3,639	16,694	831,096	225
Timiskaming and Northern Ontario Commission	1919	330	1,675	119,086	29
	1919	330	1,675	130,585	30
	1920	341	1,694	142,538	29
	1921	341	1,694	171,313	30
Algoma Central Railway[4]	1919	424	801	-	8
	1919	424	801	-	8
	1920	334	729	-	8
	1921	335	768	-	8
Algoma Eastern Railway[4]	1919	85	171	-	4
	1919	85	171	-	4
	1920	87	174	-	4
	1921	86	344	-	4
Grand Trunk Pacific Telegraph Co.	1919[2]	2,820	14,296	307,537	187
	1919[2]	2,817	14,306	307,537	187
	1920[2]	2,817	14,204	281,428	152
	1921	2,817	14,186	223,539	150
The North American Telegraph Co., Ltd.	1919	44	664	112,322	38
	1919	44	547	113,046	24
	1920	44	547	105,233	24
	1921	44	547	89,981	22

[1]Cablegrams not included.
[2]Statistics of lines in Ontario, Quebec and New Brunswick not included.
[3]Not including press messages.
[4]These are telephone lines and are used for both despatching and commercial business.

Submarine Cables.—Six transoceanic cables have a terminus in Canada—five of them on the Atlantic and one on the Pacific coast. The date on which the cable was first shown to be of commercial value was in 1866, and up to the present their use has greatly increased. The Atlantic cables are controlled by English and American interests. The Pacific cable, from Canada to Australia and New Zealand, has been in operation since 1902, and is owned by a partnership of the Governments of Great Britain, New Zealand, Australia and Canada.

Marconi Wireless.—Since the transmission of the first transatlantic wireless message in 1901 and the organization in Canada of the Marconi Wireless Telegraph Co. in 1903, communication has been established between many stations throughout the country and with the outside world. Plans are at present under way for a wireless route which will encircle the world by means of stations in Canada and other parts of the Empire.

Radiotelegraph Stations.—Table 70 shows the name, situation and range in nautical miles of the radiotelegraph stations in Canada and Newfoundland. The stations are divided broadly into government owned, and licensed commercial

stations. Of the government owned, a distinction is shown in Table **70** between those operated by government and those operated under contract by the Marconi Company. Commercial stations are subdivided into private and public.

Table **71** gives the names of Canadian Government steamers that are equipped with radiotelegraph apparatus, with the range in miles for each steamer. A transatlantic commercial wireless service is carried on by the Glace Bay, N.S., station which works with Ongar, Essex, England, the charge being 18 cents per word as against 20 cents by cable.

Table **72** gives the number of messages and words handled and the cost of maintenance for the government stations of the east and west coasts and of the Great Lakes. For the year 1922-23 the total number of messages was 311,732 as compared with 327,092 in 1921-22, and of words handled 5,466,698 as compared with 5,445,020 in 1921-22.

70.—Radio Stations Licensed in Canada, for the fiscal year 1922-23.

Names of Stations.	Situation.	Range in nautical miles.
GOVERNMENT OWNED STATIONS.[1]		
EAST COAST.		
Belle Isle, Nfld.*	Belle Isle Straits	250
Point Amour, Nfld.*	Belle Isle Straits	150
St. John, N.B.[2]	Red Head, N.B	250
Cape Race, Nfld.*	North Atlantic	400
Grindstone Island, Que.*	Gulf of St. Lawrence (Magdalen Island)	200
Fame Point, Que.*	Gulf of St. Lawrence	250
Clark City, Que.*	Gulf of St. Lawrence	250
Father Point, Que.*	St. Lawrence River	250
Grosse Isle, Que.*	St. Lawrence River	100
Quebec, Que.*	St. Lawrence River	150
Montreal, Que.*	St. Lawrence River	200
Cape Sable, N.S.*	North Atlantic	250
Cape Bear, P.E.I.[3]*	Northumberland Strait	150
North Sydney, C.B.*	North Sydney, C.B	100
Camperdown, N.S.*	Entrance to Halifax Harbour	250
Sable Island, N.S.*	North Atlantic	300
Halifax, N.S.	Halifax Dockyard	100
Glace Bay[4]*	Near Glace Bay, N.S. (Press service to subscribing ships)	–
Direction Finding Stations.		
Canso D/F	Nova Scotia	150
Cape Race D/F	Newfoundland	250
Chebucto D/F	Nova Scotia	150
St. John D/F	New Brunswick	150
GREAT LAKES.		
Port Arthur, Ont.*	Port Arthur, Ont	350
Sault Ste. Marie, Ont.*	Sault Ste. Marie, Ont	350
Tobermory, Ont.*	Entrance Georgian Bay, Ont	350
Midland, Ont.*	Georgian Bay, Ont	350
Point Edward, Ont.*	Lake Huron	350
Port Burwell, Ont.*	Lake Erie	350
Toronto, Ont.*	Toronto Island, Ont	350
Kingston, Ont.*	Barriefield Common	350
WEST COAST.		
Gonzales Hill, B.C. (Victoria)	Victoria, B.C	250
Point Grey, Vancouver, B.C	Entrance Vancouver Harbour	150
Cape Lazo, B.C	Strait of Georgia, near Comox, B.C	350

[1] Of the government owned stations some only are operated by the government. The rest are operated by the Marconi Co. and are indicated by an *.

[2] This is the same station as St, John D/F below, but is included under two headings to indicate its two functions. It is counted only as a D/F station in the summary table (**73**).

[3] Temporarily closed since July 1, 1922. Not counted in table **73**.

[4] Limited coast station.

77.—Radio Stations Licensed in Canada, for the fiscal year 1922-23—concluded.

Names of Stations.	Situation.	Range in nautical miles.
GOVERNMENT OWNED STATIONS—concluded.		
WEST COAST—concluded.		
Estevan Point, B.C.	West Coast Vancouver Island, B.C.	500
Dead Tree Point, B.C.	South of Graham Island, Q.C.I.	200
Digby Island, B.C., Prince Rupert	Digby Island, Entrance Prince Rupert Harbour	250
Alert Bay, B.C.	Cormorant Island, B.C.	350
Bull Harbour, B.C.	Hope Island, Vancouver Island., B.C.	350
HUDSON BAY.		
Port Nelson[1]	Hudson Bay	750
Pas, Man.[1]	For communication with Port Nelson only	750
LICENSED COMMERCIAL STATIONS.		
Public Commercial.		
Glace Bay	Glace Bay, C.B.	3,000
Louisburg	Glace Bay, C.B.	1,000
Vancouver	Vancouver, B.C.	7,000
Markham	Near Toronto, Ont.	1,000
Bird's Hill	Near Winnipeg, Man.	670
Montreal	Montreal, Que.	3,000
Private Commercial.		
Thetford Mines	Thetford Mines, Que.	200
Shawinigan Falls	Shawinigan Falls, Que.	200
Maisonneuve	Montreal, Que.	200
Swanson Bay	Swanson Bay, B.C.	150
Ocean Falls	Cousins Inlet, B.C.	150
Buckley Bay	Massett Inlet, B.C.	100
Thurston Harbour	Thurston Harbour, B.C.	100
Port Alice	Quatsino Sound, B.C.	100
Margaret Bay	Smith Inlet, B.C.	100
Iroquois Falls	Iroquois Falls, Ont.	20
Twin Falls	Twin Falls, Ont.	20
Victoriaville	Victoriaville, Que.	200
Quebec	Quebec City	200
Anyox	Anyox, B.C.	100
Hamilton	Hamilton, Ont.	50
Toronto	Toronto, Ont.	50
Gouin Dam	Gouin Dam, Que.	200
New Glasgow	New Glasgow, N.S.	25
Bear Trap Camp	Bear Trap Camp, N.S.	25
Vancouver	Vancouver, B.C.	300
Niagara Falls	Niagara Falls, Ont.	100
Twenty Mile Creek	Twenty Mile Creek, Ont.	50
Port Credit	Port Credit, Ont.	50
Toronto	Toronto, Ont.	65
Burlington	Burlington, Ont.	65
Anticosti Island	Anticosti Island	75
Toronto	Toronto, Ont.	65
Cooksville	Cooksville, Ont.	25
York	York, Ont.	25
Guelph	Guelph, Ont.	25
Preston	Preston, Ont.	25
Kitchener	Kitchener, Ont.	25
Stratford	Stratford, Ont.	25
St. Mary's	St. Mary's, Ont.	25
Brant	Brant, Ont.	25
Woodstock	Woodstock, Ont.	25
St. Thomas	St. Thomas, Ont.	25
Chatham	Chatham, Ont.	25
Walkerville	Walkerville, Ont.	50
Sydney	Sydney, N.S.	500
Montreal	Montreal, Que.	Receiving only.
Blubber Bay	Texada Island, B.C.	125
Winnipeg	Winnipeg, Man.	50

[1]Temporarily closed. The station at Pas is a land station.

71.—Canadian Government Steamers Equipped with the Radiotelegraph, fiscal year 1922-23.

Names.	Range.	Names.	Range.
	Miles.		Miles.
Aberdeen	100	Aranmore	150
Acadia	200	Bellechasse	150
Arleux	100	Laurentian	150
Armentières	100	Malaspina	200
Arras	100	Margaret	200
Dollard	150	Montcalm	150
Druid	100	Newington	100
Estevan	200	Sheba	200
Givenchy	100	Stanley	150
Gulnare	100	Thiepval	100
Lady Grey	100	Lady Laurier	150
Arctic	1,000	Tyrian	150
Lurcher (lightship)	150	Sagamore	150
Mikula	250	Grib	125
Anticosti (lightship)	150		

72.—Business and Cost of Maintenance of Radiotelegraph Stations, for the fiscal years 1921-22 and 1922-23.

Stations.	1921-22.			1922-23.		
	Messages handled.	Words handled.	Cost of maintenance.	Messages handled.	Words handled.	Cost of maintenance.
			$ c.			$ c.
East Coast	155,839	2,758,297	108,814 15	127,278	2,423,156	90,160 90
Great Lakes	22,692	347,223	45,243 08	30,424	468,785	44,430 86
West Coast	148,561	2,339,500	73,431 42	154,030	2,574,757	76,599 36
Totals	**327,092**	**5,445,020**	**227,488 65**	**311,732**	**5,466,698**	**211,191 12**

Radio Telephony.—Radio telephony—the wireless transmission of the human voice—is a later development of radio wireless. During the Great War, radio telephony was perfected for the use of warships and airplanes. In 1920 and 1921 its peace time possibilities were, for the first time, widely appreciated, and musical programmes were broadcasted by electrical companies as part of their campaign to sell private radio equipment. Radio telephony has become a very practicable means of relaying telephone messages to places where the population is too sparse to support a telephone system and to ships at sea. But radio telephony is not applicable to the regular business of telephone companies in urban districts, because only a limited number of messages can be transmitted simultaneously without interference.

Table 73 shows a summary classification of radio stations in Canada.

73.—Wireless and Radio Stations in Operation in Canada, as at March 31, 1923.

Kind of Station.	Number.
Coast Stations (Government owned)	32
Land Stations	1
Direction Finding Stations (Government owned)	4
Ship Stations (Government owned)	29
Ship Stations (Commercial)	226
Limited Coast Stations	1
Public Commercial Stations	6
Private Commercial Stations	44
Private Commercial Broadcasting Stations	51
Experimental Stations	57
Amateur Experimental Stations	1,449
Amateur Broadcasting Stations	8
Private Receiving Stations	9,956
Radio Training Schools	18
Total	**11,882**

XI.—TELEPHONES.

Telephone development in Canada dates from the year 1880, when the Bell Telephone Co. was incorporated by Act of Parliament. Although at this time all patents and lines were owned by the Canadian Telephone Co., they were dependent on the Bell Co., to which they sold out in 1882. By 1883 the first submarine telephone cable had been laid between Windsor and Detroit, and during the year the Bell Co. operated in Canada 4,400 rental-earning telephones, 44 exchanges and 40 agencies, with 600 miles of long distance wire. It controlled development in all the provinces except British Columbia, where the greater part of the system has always been in the hands of the British Columbia Telephone Co., Ltd.

With rapid growth of private companies in the Maritime provinces, the lines of the Bell Co. were disposed of in 1888 to the Maritime Telegraph and Telephone Co. in Nova Scotia, and to the New Brunswick Telephone Co. in New Brunswick, an interest in these corporations being retained under the terms of sale. A development of a different kind is seen in the three prairie provinces, where well organized systems were sold to the governments of Manitoba and Alberta in 1908 and to Saskatchewan in 1909. The lines in Ontario and Quebec are still largely owned by the Bell Telephone Co.

Telephone Systems.—In all the provinces, besides the large telephone companies, are many smaller systems, both urban and rural, usually owned privately or co-operatively. The number of independent lines is particularly large in Saskatchewan. The steady growth in the use of telephones is shown in Table 78 particularly by the increase of 45,824 telephones in 1921 as compared with 1920. For each 100 of population, there were 10·26 telephones in use during 1921, over 42 p.c. of the total being in Ontario. In this respect Canada ranks second among the countries for which such data are available.

Government ownership of telephone lines has now had a 15 years' trial in Alberta, Saskatchewan and Manitoba. Figures for the year ended Dec. 31, 1922, show credit balances to profit and loss of $1,347,850, $1,005,268 and $1,322,631 from the operation of government-owned lines in Alberta, Saskatchewan and Manitoba respectively.

Telephone Statistics.—The following tables give figures illustrative of the use of telephones and of the operation of telephone companies for 1921, the latest year available, and previous years.

74.—Progress of Telephones in Canada for the years ended June 30, 1917-1919, and for the calendar years 1919-1921.

Items.	June 30.			December 31.		
	1917.	1918.	1919.	1919.	1920.	1921.
	$	$	$	$	$	$
Capitalization	79,121,702	85,274,691	91,004,925	100,587,833	116,689,705	132,537,771
Cost of property, etc.	94,469,534	104,368,628	113,296,160	125,017,222	144,560,969	158,678,229
Revenue	20,122,282	22,753,280	24,600,536	29,401,006	33,473,712	36,986,913
Operating expenses	12,095,426	13,644,518	16,167,992	20,081,436	28,044,401	30,080,035
Salaries and wages	8,882,593	10,410,807	13,048,055	15,774,586	17,294,405	19,000,422
	No.	No.	No.	No.	No.	No.
Telephone Companies	1,695	2,007	2,047	2,219	2,327	2,365
Wire mileage	1,708,202	1,736,062	1,822,372	1,956,830	2,105,101	2,268,271
Telephones	604,136	662,330	724,500	778,758	856,266	902,090
Employees	16,490	17,336	19,057	20,491	21,187	19,943
Persons per telephone	13·4	12·2	12·2	11·3	10·2	9·7
Persons per mile of wire	4·7	5·0	4·5	4·5	4·2	3·9

Statistics of the number of telephone companies reporting to the Dominion Bureau of Statistics are given in Tables **75** and **76**. Special attention may be drawn to the growth of co-operative companies.

75.—Number of Telephone Companies in Canada, by Provinces, December 31, 1921.

Provinces.	Government.	Municipal.	Stock.	Co-operative.	Partnership.	Private.	Total.
	No.	No.	No.	No.	No.	No.	No.
Prince Edward Island	–	–	1	43	–	–	44
Nova Scotia	–	–	29	174	–	8	211
New Brunswick	–	–	16	11	–	6	33
Quebec	–	–	73	65	–	22	160
Ontario	2	90	202	254	7	53	608
Manitoba	1	8	2	25	–	2	38
Saskatchewan	1	4	283	927	–	–	1,215
Alberta	1	1	6	34	–	1	43
British Columbia	–	–	1	11	–	–	12
Yukon	–	–	1	–	–	–	1
Total	**5**	**103**	**614**	**1,544**	**7**	**92**	**2,365**

76.—Number of Telephone Companies in Canada, 1911-1921.[1]

Years.	Government.	Municipal.	Stock.	Co-operative.	Partnership.	Private.	Total.
1911	3	25	308	101	18	82	537
1912	3	25	368	133	31	113	683
1913	4	52	543	262	63	151	1,075
1914	4	58	611	297	48	118	1,136
1915	4	62	584	601	28	117	1,396
1916	4	67	622	765	23	111	1,592
1917	5	73	645	841	17	114	1,695
1918	5	74	735	1,085	12	96	2,007
1919	5	89	666	1,346	18	95	2,219
1920	5	88	647	1,495	9	83	2,327
1921	5	103	614	1,544	7	92	2,365

[1] The years 1911–1918 are from July 1 to June 30. Figures for 1919, 1920 and 1921 are for the calendar years.

In the two tables following, figures are shown giving the number of telephones in use, the mileage of wire, and the number of employees of telephone companies, by provinces, for the year 1921, and for the Dominion, from 1911 to 1921.

77.—Telephones in use, mileage of Wire and number of Employees, by Provinces, December 31, 1921.

Provinces.	Telephones in use.			Mileage of wire.	Number of employees.
	Central Energy.	Magneto.	Total.		
	No.	No.	No.	Miles.	No.
Prince Edward Island	1,656	3,302	4,958	5,026	86
Nova Scotia	22,003	13,415	35,418	62,383	935
New Brunswick	16,218	10,104	26,322	39,814	689
Quebec	107,832	39,024	146,856	386,498	4,290
Ontario	229,415	150,796	380,211	816,057	8,720
Manitoba	46,540	21,923	68,463	240,186	1,498
Saskatchewan	43,027	53,212	96,239	296,274	1,082
Alberta	32,266	32,117	64,383	238,733	908
British Columbia	68,874	10,195	79,069	182,700	1,729
Yukon	–	171	171	600	6
Total	**567,831**	**334,259**	**902,090**	**2,268,271**	**19,943**

78.—Telephones in use, mileage of Wire and number of Employees, 1911-1921.

Years.	Telephones in use.			Mileage of wire.	Number of employees.
	Central Energy.	Magneto.	Total.		
	No.	No.	No.	Miles.	No.
1911	174,994	127,765	302,759	687,782	10,425
1912	212,732	158,152	370,884	889,572	12,783
1913	269,843	193,828	463,671	1,092,587	12,867
1914	310,166	210,978	521,144	1,343,090	16,799
1915	313,225	219,865	533,090	1,452,360	15,072
1916	323,109	225,312	548,421	1,600,564	15,247
1917	352,770	251,366	604,136	1,708,203	16,490
1918	384,687	277,643	662,330	1,848,466	17,336
1919	474,541	304,217	778,758	2,105,240	20,491
1920	524,593	331,673	856,266	2,105,101	21,187
1921	567,831	334,259	902,090	2,268,271	19,943

Financial statistics of Canadian telephone companies are given in Tables 79 and 80 below.

79.—Financial Statistics of Telephone Companies, by Provinces, for the calendar year 1921.

Provinces.	Capital stock.	Funded debt.	Cost of property and equipment.	Salaries and wages.	Gross revenue.	Operating expenses.	Net operating revenue.
	$	$	$	$	$	$	$
Prince Edward Island	341,870	100,000	599,220	39,785	131,399	98,159	33,240
Nova Scotia	3,485,881	2,501,009	6,371,040	509,174	1,530,040	1,308,543	221,497
New Brunswick	2,624,353	41,000	2,914,054	486,183	1,093,284	917,828	175,456
Quebec [1]	28,317,781	17,470,418	66,689,329	4,111,730	19,413,860	14,492,189	4,921,671
Ontario	2,750,417	1,818,529	7,480,225	7,801,819	1,752,551	1,539,122	213,429
Manitoba	33,118	17,470,269	17,520,122	2,270,603	3,053,196	3,536,799	−483,603
Saskatchewan	786,670	24,723,699	25,476,719	688,525	3,977,995	2,799,339	1,178,656
Alberta	51,636	23,685,088	20,026,415	1,266,656	2,823,793	2,586,174	237,619
British Columbia	3,737,700	2,533,333	11,407,239	1,815,828	3,191,274	2,785,267	406,007
Yukon	65,000	–	193,866	10,119	19,521	16,615	2,906
Total	**42,194,426**	**90,343,345**	**158,678,229**	**19,000,422**	**36,986,913**	**30,080,035**	**6,906,878**

80.—Financial Statistics of Canadian Telephone Companies for the years 1912-1921. [2]

Years.	Capital stock.	Funded debt.	Cost of property and equipment.	Salaries and wages.	Gross revenue.	Operating expenses.	Net operating revenue.
	$	$	$	$	$	$	$
1912	21,533,605	24,743,247	56,887,799	2,659,642	12,273,627	9,094,689	3,178,938
1913	26,590,501	33,256,503	69,214,971	6,839,309	14,897,278	11,175,689	3,721,589
1914	28,644,340	41,647,554	80,258,356	8,250,253	17,297,269	12,882,402	4,414,867
1915	28,947,122	45,337,869	83,792,583	8,357,029	17,601,673	12,836,715	4,764,958
1916	29,416,956	47,503,358	88,520,021	7,852,719	18,594,268	11,147,201	7,447,067
1917	29,476,367	49,645,335	94,469,534	8,882,593	20,122,282	12,095,426	8,026,856
1918	29,803,090	55,471,601	104,368,627	10,410,807	22,753,280	13,644,524	9,108,756
1919	35,227,233	65,360,600	125,017,222	15,774,586	29,401,006	20,081,436	9,319,570
1920	36,149,838	80,539,367	144,560,969	17,294,405	33,473,712	28,044,401	5,429,311
1921	42,194,426	90,343,345	158,678,229	19,000,422	36,986,913	30,080,035	6,906,878

[1] As the head office of the Bell Telephone Company is situated in Montreal, its very large business is necessarily credited to Quebec, though largely transacted outside of that province.

[2] Figures for the year 1912-1918 are from July 1 to June 30: those for 1919-1921 for the years Jan. 1 to Dec. 31.

XII.—THE POST OFFICE.

Historical.—A postal service was established between Montreal and Quebec as early as 1721, official messengers and other travellers making a practice of carrying letters for private persons. When Canada came under British rule, the Post Office was placed on a settled footing by Benjamin Franklin, then deputy postmaster-general for the American colonies, who visited Canada in 1763, opened post offices at Quebec, Montreal and Three Rivers, and also established courier communication between Montreal and New York. Since 1755 Halifax had had a post office and direct postal communication with Great Britain.

As a consequence of the American Revolution and the resulting isolation of Canada from Nova Scotia, the first exclusively Canadian postal service, a monthly courier route from Halifax to Quebec, was established in 1788, involving a seven weeks' trip and expenses of about £200, of which only one-third was met by postal charges. Up to 1804 the postal facilities of Upper Canada consisted of one regular trip by courier each winter with whatever mail might reach Montreal during the season of navigation. Charges were necessarily high, $1.12 being paid on ordinary letters from London to Toronto *via* Halifax.

The first post office in Toronto was opened about 1800. By 1816 there were 19 offices in the two Canadas, and in 1827 this number had increased to 114. At this time the system consisted primarily of a trunk line of communication between Halifax, Quebec, Montreal, Toronto, and Amherstburg, over which couriers travelled at varying intervals. Branching off this line were routes to Sorel, Sherbrooke, St. Johns, Hull, Hawkesbury, Perth and Richmond, with most deliveries made once or twice a week.

Hitherto the Post Office had been under the control of the Imperial Department, but considerable agitation resulted in the service being transferred on April 6, 1851, to the several provinces. Only enough mutual control was maintained to ensure the continuance of Imperial and intercolonial relations. The provinces had complete jurisdiction over the establishment and maintenance of systems and rates.

At Confederation the provincial systems were transferred to the Dominion. The Post Office Act of 1867 established a service throughout Canada. The domestic rate on letters was reduced from 5 to 3 cents per half-ounce, and in 1870 the rates to the United States and Great Britain were reduced from 10 to 6 cents and from 12½ to 6 cents respectively per half-ounce. In 1875 a convention between Canada and the United States reduced postal rates between the countries to the domestic level. In 1878, on the admission of Canada to the Postal Union, letter postage to the countries of the Postal Union was reduced to 5 cents per half-ounce. After a conference in 1897, Imperial penny postage (2 cents per half-ounce) was established on Dec. 25, 1898, while the domestic rate was reduced from 3 to 2 cents per ounce. These rates were maintained until 1915, when a 1 cent war tax, still in force, was imposed on all 2 cent letters, on post cards and postal notes. Recently the rate to Great Britain has been increased to 4 cents per ounce and that to the Postal Union has been raised to 10 cents per ounce.

The Post Office Department is administered by the Postmaster-General. Besides the several administrative branches within the Department, the Dominion is divided into 15 districts, each in charge of a Post Office Inspector. The Canadian system embraces a territory more extensive than that served by any other systems except those of the United States and Russia, the sparsity of population and the comparative lack of development making inevitable a peculiarly difficult and expensive service.

International Postal Conference.—An important epoch in the history of the Canadian Post Office began with the holding at Ottawa in December, 1922, of the first International Postal Conference between representatives of the United States and Canada. The development of postal reciprocity between the two countries dates from 1792, when the first postal arrangement between them was concluded. The years 1848, 1875, 1881 and 1888 mark the dates of later agreements regarding postal matters. The conference of 1922 dealt in detail with all important points in international postal relations and provided for increased facilities in the interchange of mail matter between the two countries.

Rural Mail Delivery.—A system of rural mail delivery was inaugurated in Canada on October 10, 1908, limited at that time to existing stage routes, persons residing on such routes being entitled to have mail boxes put up in which the mail carrier was to deposit mail matter and from which he was to collect mail matter and carry it to the post office. As a consequence of the public approval of this scheme, new regulations, talking effect on April 1, 1912, made all persons residing in rural districts along and contiguous to well-defined main thoroughfares of one mile and upwards eligible to receive their mail in this manner, while couriers of rural mail routes were also required to sell postage stamps and take applications for and accept money, money orders and postal notes. The result has been an increase in the number of rural routes from approximately 900 in 1912 to 3,777 in 1922, having 202,668 mail boxes as against approximately 25,000 in 1912. The establishment of these routes has been an important factor in the recent amelioration of the conditions of Canadian rural life.

Statistics.—Tables 81 to 83 show the number of post offices in operation in Canada in 1922, gross revenue in all offices collecting $10,000 and upwards, and the revenue and expenditure of the department since 1890.

81.—Number of Post Offices in Operation in the several Provinces of Canada, March 31, 1922.

Provinces.	Post Offices			
	In Operation Mar. 31, 1921.	Established during Year.	Closed during Year.	In Operation Mar. 31, 1922.
Prince Edward Island	136	–	3	133
Nova Scotia	1,844	8	18	1,834
New Brunswick	1,134	4	5	1,133
Quebec	2,293	31	23	2,301
Ontario	2,582	35	40	2,577
Manitoba	798	13	9	802
Saskatchewan	1,416	24	34	1,406
Alberta	1,187	25	24	1,188
British Columbia	834	28	16	846
Yukon Territory	23	1	3	21
Northwest Territories	5	1	–	6
Total	**12,252**	**170**	**175**	**12,247**

82.—Statistics of Gross Postal Revenue of Offices collecting $10,000 and upwards, for the fiscal years 1921 and 1922.

Name of Post Office.	1921.	1922.
	$	$
P.E. Island.		
Charlottetown	55,511	60,133
Summerside	20,655	20,511
Total for Province	**152,403**	**150,820**
Nova Scotia.		
Amherst	42,377	41,550
Antigonish	14,166	13,373
Bridgewater	15,764	14,520
Dartmouth	14,263	13,570
Glace Bay	17,491	17,759
Halifax	396,208	394,438
Kentville	18,759	19,801
Lunenburg	11,579	11,495
New Glasgow	36,141	34,444
North Sydney	17,993	18,446
Pictou	14,271	13,990
Sydney	67,623	64,304
Sydney Mines	10,344	9,643
Truro	51,074	51,041
Windsor	18,145	19,151
Wolfville	12,456	14,125
Yarmouth	26,321	26,741
Total for Province	**1,303,666**	**1,277,076**
New Brunswick.		
Bathurst	13,505	11,759
Campbellton	19,080	19,009
Chatham	13,586	12,667
Edmundston	11,390	12,320
Fredericton	61,663	61,692
Moncton	324,358	325,835
Newcastle	13,776	13,098
St. John	267,516	271,149
St. Stephen	18,043	19,282
Sackville	14,893	15,108
Sussex	14,845	15,057
Woodstock	18,647	18,935
Total for Province	**1,123,007**	**1,110,385**
Quebec.		
Chicoutimi	21,288	24,070
Coaticook	10,892	11,336
Granby	15,093	15,625
Hull	26,221	28,952
Joliette	19,910	19,958
La Tuque	13,702	12,138
Magog	9,727	10,490
Montreal	3,182,947	3,278,467
Quebec	424,267	465,553
Richmond	10,417	10,625
Rimouski	11,926	12,694
Ste. Agathe des Monts	9,182	10,102
St. Hyacinthe	31,885	32,673
St. Johns	18,370	20,361
Shawinigan Falls	22,960	20,469
Sherbrooke	96,955	103,592
Sorel	11,309	10,327
Thetford Mines	13,588	12,652
Timiskaming Station	10,074	4,450
Three Rivers	51,255	53,757
Valleyfield	11,602	12,603
Victoriaville	14,263	14,536
Total for Province	**5,408,224**	**5,530,513**
Ontario.		
Amherstburg	10,417	9,684
Arnprior	14,496	14,925
Aurora	11,369	11,840
Aylmer West	13,812	13,915
Barrie	25,112	25,562
Belleville	51,839	52,397
Bowmanville	12,632	13,273
Bracebridge	12,557	13,008
Brampton	22,221	23,008
Brantford	134,049	140,608
Bridgeburg	16,235	20,685
Brockville	48,306	49,589
Campbellford	10,542	10,732
Carleton Place	14,243	16,647
Chatham	67,552	67,662
Cobalt	25,133	22,561
Cobourg	22,019	22,950
Cochrane	13,405	13,537
Collingwood	24,052	22,962
Cornwall	30,710	31,373
Dundas	17,512	15,103
Dunnville	18,620	19,263
Fergus	14,494	12,720
Ford	15,435	13,755
Fort William	68,916	70,862
Fort Frances	12,646	13,007
Galt	59,440	61,341
Gananoque	17,237	16,808
Georgetown	10,168	11,108
Goderich	17,426	17,716
Grimsby	12,373	15,501
Guelph	98,523	100,210
Haileybury	16,148	16,386
Hamilton	544,834	551,209
Hanover	12,612	13,727
Harriston	10,210	10,142
Hespeler	10,781	11,720
Huntsville	12,312	11,818
Ingersoll	24,681	22,702
Iroquois Falls	12,246	10,228
Kenora	20,223	17,831
Kincardine	11,165	12,675
Kingston	108,255	107,360
Kitchener	29,082	95,282
Leamington	15,685	15,759
Lindsay	30,545	32,663
Listowel	13,096	13,362
London	388,716	443,079
Meaford	11,237	10,672
Midland	21,101	20,221
Napanee	20,028	19,815
New Liskeard	12,106	12,946
Newmarket	16,472	17,147
Niagara Falls	87,289	92,940
North Bay	42,717	45,774
Oakville	13,867	14,757
Orangeville	11,625	10,711
Orillia	42,107	40,588
Oshawa	53,998	54,555
Ottawa	510,842	560,596
Owen Sound	45,230	47,782
Paris	17,157	18,468
Parry Sound	14,444	15,036
Pembroke	29,642	29,470
Perth	25,701	26,218
Peterborough	95,833	101,245
Petrolia	13,820	14,272
Picton	15,867	16,411
Port Arthur	51,759	53,040
Port Colborne	14,617	13,381
Port Hope	20,362	20,843
Prescott	12,730	13,143
Preston	20,405	21,920
Renfrew	27,249	25,059
St. Catharines	85,243	85,720
St. Marys	16,804	18,227
St. Thomas	58,742	61,196
Sarnia	61,495	62,814
Sault Ste. Marie	77,894	70,955
Seaforth	10,547	10,344
Simcoe	19,819	21,111

82.—Statistics of Gross Postal Revenue of Offices collecting $10,000 and upwards, for fiscal years 1921 and 1922—concluded.

Name of Post Office.	1921.	1922.
Ontario—concluded.	$	$
Smiths Falls	26,251	26,395
Stratford	54,734	59,281
Stratford Station	11,969	11,702
Strathroy	11,609	11,834
Sturgeon Falls	10,529	10,517
Sudbury	50,529	47,110
Thorold	18,460	16,347
Tilsonburg	14,414	14,361
Timmins	17,284	21,088
Toronto	4,947,777	5,223,979
Trenton	18,590	18,900
Walkerton	11,217	11,629
Walkerville	56,732	52,215
Wallaceburg	13,425	12,910
Waterloo	26,978	28,806
Welland	46,202	42,799
Weston	14,800	17,617
Whitby	11,267	11,798
Windsor	208,673	193,050
Wingham	11,853	11,802
Woodstock	47,926	51,103
Total for Province	**11,416,685**	**11,847,296**
Manitoba.		
Brandon	102,461	106,905
Dauphin	24,539	24,396
Neepawa	12,228	12,210
Portage la Prairie	39,472	40,645
Virden	10,078	9,555
Winnipeg	2,838,805	2,860,898
Total for Province	**3,577,832**	**3,594,511**
Saskatchewan.		
Battleford	9,723	10,057
Estevan	19,717	18,825
Humboldt	12,936	12,677
Lloydminster	10,107	10,204
Maple Creek	12,553	10,465
Melfort	14,074	13,595
Melville	12,533	12,850
Moose Jaw	138,049	132,998
North Battleford	25,965	25,937
Prince Albert	47,882	47,559
Regina	588,582	629,304
Saskatoon	248,511	250,698
Shaunavon	12,360	13,485
Swift Current	38,074	33,678
Weyburn	32,494	30,648
Yorkton	37,282	35,659
Total for Province	**2,452,275**	**2,468,648**

Name of Post Office.	1921.	1922.
Alberta.	$	$
Banff	14,634	14,547
Calgary	558,569	532,233
Camrose	15,248	14,771
Drumheller	15,713	18,609
Edmonton	420,466	443,880
Hanna	10,744	10,232
Lacombe	11,931	12,547
Lethbridge	64,661	68,227
Macleod	11,028	10,191
Medicine Hat	52,954	48,585
Red Deer	18,022	19,975
Stettler	11,150	10,861
Vermilion	11,213	10,694
Vegreville	10,100	10,066
Wetaskiwin	15,721	15,586
Total for Province	**2,022,739**	**1,996,163**
British Columbia.		
Chilliwack	14,831	15,276
Cranbrook	17,742	18,034
Duncan Station	14,841	15,168
Fernie	17,948	17,658
Kamloops	32,192	31,276
Kelowna	19,960	21,634
Nanaimo	26,672	27,071
Nelson	40,548	41,165
New Westminster	58,108	62,010
North Vancouver	15,595	15,353
Penticton	19,270	19,966
Prince Rupert	36,120	34,515
Revelstoke	12,816	12,245
Trail	11,424	11,288
Vancouver	919,848	960,131
Vernon	30,260	32,372
Victoria	251,864	252,980
Total for Province	**2,073,163**	**2,100,657**
Yukon.		
Total for Yukon	**11,702**	**11,995**
SUMMARY.		
P.E. Island	152,403	150,820
Nova Scotia	1,303,666	1,277,076
New Brunswick	1,123,007	1,110,385
Quebec	5,408,224	5,530,513
Ontario	11,416,685	11,847,296
Manitoba	3,577,832	3,594,511
Saskatchewan	2,452,275	2,468,648
Alberta	2,022,739	1,996,163
British Columbia	2,073,163	2,100,657
Yukon	11,702	11,995
Total	**29,541,696**	**30,088,064**

83.—Revenue and Expenditure of the Post Office Department for the quinquennial years 1890–1910, and for the fiscal years 1911–1922.

Fiscal Years.	Net revenue.	Expenditure.	Deficit.	Surplus.
	$	$	$	$
1890	2,357,389	3,074,470	717,081	–
1895	2,792,790	3,593,647	800,857	–
1900	3,183,984	3,645,646	461,662	–
1905	5,125,373	4,634,528	–	490,845
1910	7,958,547	7,215,337	–	743,210
1911	9,146,952	7,954,223	–	1,192,729
1912	10,482,255	9,172,035	–	1,310,220
1913	12,060,476	10,882,805	–	1,177,671
1914	12,956,216	12,822,058	–	134,158
1915	13,046,650	15,961,191	2,914,541	

83.—Revenue and Expenditure of the Post Office Department for the quinquennial years 1890-1910, and for the fiscal years 1911-1922—concluded.

Fiscal Years.	Net revenue.	Expenditure.	Deficit.	Surplus.
	$	$	$	$
1916	18,858,410	16,009,139	-	2,849,271
1917	20,902,384	16,300,579	-	4,601,805
1918	21,345,394	18,046,558	-	3,298,836
1919	21,602,713	19,273,584	-	2,329,129
1920	24,449,917	20,774,385	-	3,675,532
1921	26,331,119	24,661,262	-	1,669,857
1922	26,554,538	28,121,425	1,566,887	-

NOTE.—For all other years since 1868, see Canada Year Book, 1911, p. 288.

Auxiliary Services.—The auxiliary postal services—the issuing of money orders (including postal notes) and the facilities offered by the Post Office savings banks—have expanded enormously since Confederation. In 1868, for example, there were 515 money order offices in operation, issuing orders to an amount of $3,342,574. In 1922 the number of offices had increased to 5,266, while the value of orders issued was almost 42 times as large as in the earlier year. In the following tables, illustrating the use of money orders and postal notes, it will also be noticed that the large number of 10,031,198 money orders, representing a value of $139,914,186, were issued during the year. The number of postal notes received was 5,679,374, while the value of those issued amounted to $11,598,881. It may be added that postal notes are issued payable to bearer, and are in general use for the transfer of small sums, while money orders, on the other hand, are payable to order at a designated post office. Statistical tables showing the operation of the Post Office savings banks and the Dominion Government savings banks are included in the section on Finance on page 833.

84.—Operation of the Money Order System in Canada, fiscal years 1901-1922.

Fiscal Years.	Orders issued in Canada.	Value of orders issued in Canada.	Payable in		Value of orders issued in other countries payable in Canada.
			Canada.	Other countries.	
	No.	$	$	$	$
1901	1,151,024	17,956,258	14,324,289	3,631,969	2,592,845
1902	1,446,129	23,549,402	18,423,035	5,126,367	3,575,803
1903	1,668,705	26,868,202	20,761,078	6,107,124	4,604,528
1904	1,869,233	29,652,811	21,706,474	7,946,337	5,197,122
1905	1,924,130	32,349,476	23,410,485	8,938,991	5,602,257
1906	2,178,549	37,355,673	26,133,565	11,222,108	6,533,201
1907 (9 mos.)	1,845,278	32,160,098	21,958,855	10,201,243	5,393,042
1908	2,990,691	49,974,007	31,836,629	18,137,378	7,933,361
1909	3,596,299	52,627,770	36,577,552	16,050,218	7,794,751
1910	4,178,752	60,967,162	41,595,205	19,371,957	8,048,467
1911	4,840,896	70,614,862	45,451,425	25,163,437	8,664,557
1912	5,777,757	84,065,891	52,568,433	31,497,458	8,712,667
1913	6,866,563	101,153,272	61,324,030	39,829,242	9,081,627
1914	7,227,964	109,500,670	66,113,221	43,387,449	9,807,313
1915	6,990,813	89,957,906	64,723,941	25,233,965	9,707,383
1916	7,171,375	94,469,871	75,781,582	18,688,289	9,868,137
1917	8,698,502	119,695,535	97,263,961	22,431,574	9,704,610
1918	9,919,665	142,959,167	116,764,491	26,194,676	9,385,627
1919	9,100,707	142,375,809	116,646,096	25,729,713	10,351,021
1920	9,947,018	159,224,937	135,201,816	24,023,121	10,050,361
1921	11,013,167	173,523,322	155,916,232	17,607,090	6,680,971
1922	10,031,198	139,914,186	124,316,726	15,597,460	5,515,069

NOTE.—For 1868 to 1900, see Canada Year Book, 1911, p. 289.

Attention may be drawn to the discrepancy between the value of orders issued in Canada and payable in other countries, and those issued elsewhere payable in Canada. The difference (over $10,000,000 in 1922 and almost $34,000,000 in 1914), represents to a large extent remittances made by immigrants and to travellers in foreign countries. It is an indication, at least, of the large amounts sent out from Canada, and is an essential figure in the computation of our balance of trade.

85.—Money Orders, by Provinces, fiscal years 1918-1922.

Provinces.	1918.	1919.	1920.	1921.	1922.
Money order offices in—	No.	No.	No.	No.	No.
Canada	**4,930**	**4,953**	**5,106**	**5,197**	**5,266**
Prince Edward Island	48	50	53	62	63
Nova Scotia	331	333	342	344	360
New Brunswick	217	216	232	238	247
Quebec	1,065	1,069	1,093	1,111	1,126
Ontario	1,497	1,483	1,507	1,520	1,513
Manitoba	327	331	340	344	353
Saskatchewan	594	615	636	650	656
Alberta	440	443	476	490	508
British Columbia	406	408	422	433	436
Yukon Territory	5	5	5	5	4
Money orders issued in—	No.	No.	No.	No.	No.
Canada	**9,919,665**	**9,100,707**	**9,947,018**	**11,013,167**	**10,031,198**
Prince Edward Island	43,806	44,406	52,195	59,098	56,780
Nova Scotia	539,671	590,313	652,649	756,168	706,161
New Brunswick	264,547	279,021	342,868	428,648	390,186
Quebec	1,110,542	1,114,461	1,247,392	1,374,724	1,193,490
Ontario	3,136,558	2,757,205	3,086,535	3,658,178	3,073,193
Manitoba	867,968	744,702	779,379	815,550	763,640
Saskatchewan	1,638,431	1,692,030	1,762,494	1,804,563	1,804,767
Alberta	1,259,922	1,088,261	1,176,999	1,245,872	1,210,397
British Columbia	748,746	784,115	840,874	865,054	826,819
Yukon Territory	9,474	6,193	5,633	5,312	5,765
Receipts for money orders issued in—	$	$	$	$	$
Canada	**142,959,168**	**142,375,809**	**159,224,937**	**173,523,322**	**139,914,186**
Prince Edward Island	684,849	711,259	837,384	890,038	770,936
Nova Scotia	7,877,907	9,376,962	10,326,440	11,241,946	8,996,905
New Brunswick	3,996,863	4,494,810	5,679,866	6,725,201	5,385,442
Quebec	15,669,298	16,750,568	19,135,849	20,982,946	16,106,847
Ontario	40,576,601	40,482,359	47,127,150	54,348,199	42,125,653
Manitoba	11,869,796	12,036,194	13,151,959	13,727,900	10,495,309
Saskatchewan	31,964,231	27,982,176	28,592,371	29,144,606	25,991,164
Alberta	18,399,046	16,338,633	18,532,956	20,173,523	17,416,395
British Columbia	11,671,635	14,045,759	15,696,988	16,146,385	12,489,834
Yukon Territory	248,942	157,089	143,974	142,578	135,701
Number of money orders paid in—	No.	No.	No.	No.	No.
Canada	**7,923,732**	**8,033,665**	**9,104,136**	**9,864,184**	**9,080,463**
Prince Edward Island	31,999	35,228	33,787	36,599	32,566
Nova Scotia	235,606	247,749	288,529	419,594	391,347
New Brunswick	138,946	142,906	207,579	704,072	645,812
Quebec	1,232,482	875,334	956,990	1,057,289	918,941
Ontario	2,595,537	3,238,259	3,775,383	3,551,679	3,209,381
Manitoba	1,936,761	1,786,195	1,992,408	1,790,933	2,055,452
Saskatchewan	1,025,124	977,016	1,062,526	929,641	1,013,055
Alberta	355,988	364,033	391,786	971,594	405,821
British Columbia	370,261	365,824	394,094	401,910	407,276
Yukon Territory	1,028	1,121	1,054	873	812
Amount of money orders paid in—	$	$	$	$	$
Canada	**125,267,851**	**127,219,233**	**146,405,784**	**162,992,196**	**130,593,935**
Prince Edward Island	617,456	713,725	713,292	800,594	661,531
Nova Scotia	4,432,929	5,027,434	5,616,039	6,764,328	5,647,534
New Brunswick	2,576,597	2,937,008	3,955,777	10,415,372	8,268,419
Quebec	16,761,173	14,647,863	17,206,557	22,998,684	15,293,200
Ontario	40,013,727	44,029,412	53,250,399	52,562,211	42,445,288
Manitoba	31,430,519	29,017,441	32,092,104	31,633,328	27,765,545
Saskatchewan	15,399,242	15,228,040	16,668,206	18,303,344	14,457,674
Alberta	7,420,506	7,675,350	8,328,840	10,368,069	8,143,535
British Columbia	6,587,920	7,914,636	8,548,570	9,128,855	7,894,752
Yukon Territory	27,782	28,324	26,000	17,411	16,457

86.—Number and Total Values of Postal Notes, fiscal years 1917-1922.

Values.	1917.	1918.	1919.	1920.	1921.	1922.
$	No.	No.	No.	No.	No.	No.
0.20	286,587	235,579	191,362	166,078	144,084	158,108
0.25	328,095	327,138	306,642	275,214	227,789	281,679
0.30	245,720	229,152	222,590	204,429	175,564	190,364
0.40	251,056	244,294	228,783	229,954	240,085	225,044
0.50	444,677	433,142	417,145	409,967	389,935	425,943
0.60	234,783	233,977	220,299	220,006	226,510	213,320
0.70	127,929	133,578	124,850	131,031	146,247	124,558
0.75	248,858	234,081	225,925	188,561	173,389	190,413
0.80	196,446	198,667	188,117	189,654	196,695	175,443
0.90	201,414	202,228	185,790	191,881	208,922	186,400
1.00	958,563	923,891	891,539	851,118	864,275	837,437
1.50	417,791	426,230	420,503	433,896	467,034	393,725
2.00	599,418	643,685	725,992	603,156	619,726	578,353
2.50	263,419	276,419	266,918	277,871	277,766	240,269
3.00	404,652	424,815	423,243	421,983	452,632	419,969
4.00	257,961	284,362	276,919	278,762	317,232	293,936
5.00	435,429	453,310	472,832	479,251	499,089	477,460
10.00	276,709	303,245	277,764	277,306	300,787	266,953
Total notes received.....No.	6,179,507	6,207,793	6,067,213	5,830,118	5,927,791	5,679,374
Total value, including postage stamps affixed..... $	11,943,859	12,535,579	12,368,069	12,122,720	12,792,855	11,827,896
Commission received..... $	131,757	134,516	131,913	127,964	132,393	124,957
Postal notes issued to postmasters...No.	6,386,535	6,339,230	6,094,255	5,901,171	5,902,035	5,580,475
Value of notes issued..... $	12,430,270	12,948,457	12,548,384	12,304,949	13,026,166	11,598,881

87.—Issue of Postage Stamps, etc., fiscal years 1921-1922.

Denominations.	Issue 1921.		Issue 1922.	
	Number.	Value.	Number.	Value.
	No.	$	No.	$
1	272,271,500	2,722,715	250,871,900	2,508,719
2	288,531,300	5,770,626	280,351,900	5,607,038
3	403,395,000	12,101,850	394,869,400	11,846,082
5	23,930,850	1,196,543	29,423,800	1,471,190
7	12,454,100	871,787	10,829,300	758,051
10	25,735,700	2,573,570	30,957,050	3,095,705
20	4,168,300	833,660	4,862,500	972,500
50	667,325	333,663	673,790	336,895
10 Special Delivery	396,065	39,607	410,975	41,097
1 cent P. Due	714,000	7,140	1,132,900	11,329
2 "	1,594,350	31,887	2,530,750	50,615
5 "	400,100	20,005	683,700	34,185
1 cent stamp books, 25c. each	372,521	93,130	443,663	110,916
2 cent stamp books, 25c. each	274,690	68,672	323,574	80,894
3 cent stamp books, 25c. each	–	–	218,159	54,540
1cent rolls (sidewise) $5.06 each	51,518	260,681	33,187	167,926
2 " " $10.06 each	33,889	340,923	29,470	296,468
3 " " $15.06 each	48,351	728,166	45,461	684,643
1cent rolls (endwise) $5.06 each	–	–	60	304
2 " " $10.06 each	1,405	14,134	32	322
1 " " $5.10 each	–	–	501	2,555
2 " " $10.10 each	–	–	455	4,595
3 " " $15.10 each	–	–	333	5,028
1 cent post bands at $1.20 per 100	762,800	9,154	1,149,400	13,793
1 cent post cards	9,850,700	98,507	13,542,600	135,426
2 cent post cards	12,361,000	247,220	12,004,400	240,088
1 cent advertising cards, 16 on sheet	250,000	2,500	598,000	5,980
2 " " " "	470,000	9,400	452,000	9,040
1 cent advertising cards, 8 on sheet	876,000	8,760	782,000	7,820
2 " " "	3,116,000	62,320	2,219,000	44,380
1 cent advertising cards, single	1,645,500	16,455	1,102,500	11,025
2 " " "	77,000	1,540	102,400	2,048
6 cent post cards for Postal Union countries	–	–	59,150	3,549
2 cent reply post cards	204,400	4,088	230,100	4,602
1 cent special wrappers	857,100	8,571	873,400	8,734
6 cent reply coupons	29,010	1,741	17,490	1,049
1 cent stamped envelopes, $1.20 per 100	770,075	9,241	–	–
1 cent stamped envelopes, $1.30 per 100	844,250	10,975	1,692,000	21,996
2 cent stamped envelopes, $2.20 per 100	1,406,475	30,942	–	–
2 cent stamped envelopes, $2.30 per 100	1,437,450	33,061	1,631,550	37,526
3 cent stamped envelopes, $3.30 per 100	–	–	2,689,700	88,760
Totals	**1,069,998,724**	**28,563,234**	**1,047,838,550**	**28,777,413**

Subsidies, etc.—The conveyance of mail by land and water entailed a total expenditure during 1922 of $14,534,038. Land transportation (largely that by rural delivery), cost $6,162,712; railway carriage cost $7,786,549; while that by steamship amounted to $584,777. These amounts were paid solely for services rendered as carriers. In addition, however, considerable mail is carried on both the Atlantic and Pacific coasts, by steamships and steamship lines, which are especially subsidized by the government. Table 88, showing amounts so paid in 1920, 1921 and 1922, is appended.

88.—Mail Subsidies and Steamship Subventions, fiscal years 1920-1922.

Services.	1920.	1921.	1922.
	$	$	$
Canada and the West Indies or South America, or both	–	327,564	340,667
Canada and Great Britain	229,345	–	–
Canada and South Africa	133,833	146,000	133,833
Canada and Australia or New Zealand or both on Pacific Ocean	124,968	124,642	127,162
Canada (Atlantic) and Australia and New Zealand	70,000	140,000	–
Canada, China and Japan	367,187	–	88,229
Canada and Newfoundland	57,587	20,295	30,513
Ferry service between Campment, l'Ours island and mainland of Georgian bay	167	3,000	2,000
St. John and Digby	19,391	9,584	9,648
St. John, Digby, Annapolis and Granville	2,000	2,000	2,000
St. John, N.B., and Minas Basin and Margaretsville, N.S.	6,500	3,750	5,724
St. John, Westport and Yarmouth	10,000	10,000	10,000
St. John, Halifax, West Indies or South America	340,667	–	–
St. John and Bridgetown	2,500	2,000	1,500
Halifax, La Have, and La Have river ports	–	3,731	4,961
Halifax and Sherbrooke	2,000	–	–
Halifax, Mahone, Tancook Isle, etc	3,000	–	–
Halifax and Newfoundland	10,000	5,000	5,000
Halifax, Canso and Guysboro	5,000	6,596	6,798
Halifax and Spry bay and ports in C. Breton	4,000	3,846	5,885
Halifax and West Coast of C.B.	4,000	4,000	6,000
Halifax, south Cape Breton and Bras d'Or lake ports	6,000	6,000	6,000
Pictou, Souris and the Magdalen islands	–	–	24,000
Grand Manan and mainland	12,500	15,000	15,000
Quebec, Montreal and Paspebiac	–	–	29,000
Quebec, Natashquan and Harrington	–	–	50,000
Quebec and ports on the shores of the Gulf of St. Lawrence and between ports in P.E. Island, Nova Scotia, Newfoundland and Magdalen islands	63,380	68,906	–
Pictou and Montague, Murray Harbour, etc., and Georgetown	6,000	6,000	6,000
Pictou and New Glasgow and Antigonish County ports and Mulgrave	1,500	1,500	1,397
Pt. Mulgrave and Guysboro	5,204	6,560	6,918
Pt. Mulgrave, St. Peter's, etc	5,980	6,208	6,500
Pt. Mulgrave and Canso	9,287	11,500	13,370
Pictou, Mulgrave and Cheticamp	7,500	7,500	7,500
Petit de Grat and Mulgrave I.C.R. terminus	6,900	8,062	9,916
Baddeck and Iona	6,825	6,825	8,000
Sydney and Whycocomagh	4,000	4,000	4,000
Sydney to Bras d'Or lake ports and ports on east and west coasts of C.B.	8,421	14,000	14,000
Sydney and bay St. Lawrence ports	6,000	9,000	9,000
Charlottetown, Pictou and New Glasgow	–	–	2,000
Victoria, Vancouver and Skagway	23,229	23,594	24,219
Charlottetown, Victoria and Holiday's Wharf	2,031	2,500	3,500
Victoria and Vancouver island (west coast)	4,375	15,000	15,000
Victoria and San Francisco	2,077	2,740	2,135
Newcastle, Neguac and Escuminac, Miramichi river and bay	3,000	3,000	3,939
Pelee island and mainland	8,000	8,000	8,000
Froude's point and Lockport	1,000	–	–
Prince Rupert, B.C., and Queen Charlotte islands	21,000	21,000	21,000
Vancouver and ports on Howe sound	2,240	3,202	3,066
St. John and St. Andrews, N.B.	4,000	4,000	4,000
Vancouver and northern ports of B.C.	16,800	24,800	24,800
Expenses in connection with the supervision of subsidized steamship services	3,512	3,604	3,716
Total subsidies and subventions	**1,632,906**	**1,094,569**	**1,105,896**

NOTE.—The figures in the above table are taken from the "Public Accounts," as issued by the Finance Department; they represent the amounts paid in connection with contracts made under statutory authority by the Department of Trade and Commerce for trade services, including the conveyance of mails.

X.—LABOUR, WAGES AND PRICES.

I.—LABOUR.

1.—Occupations of the People.

The occupations of the people of a country at any given time are mainly determined by its natural resources and the stage which has been reached in their development. The outstanding characteristics of Canada are its enormous extent, its immense natural resources and the comparatively slight development of these, only the southern portions of the country being as yet at all developed. The developed areas fall into four economic units with quite distinct physical characteristics: first the Maritime Provinces, where lands, forests, mines and fisheries are the chief natural resources; secondly, Ontario and Quebec, with lands, forests, mines and abundant water power for manufacturing purposes; thirdly, the Prairie Provinces, where the land is the chief natural resource except in Alberta, which contains immense coal deposits; lastly, British Columbia with fisheries, forests, and mines, where agriculture plays a comparatively minor part. Though, when the country as a whole is considered, the immense fertile areas of arable land must be considered as its chief natural resource, in different parts of its vast expanse other resources predominate, and give the key to the chief occupations of the people.

In Canada, as in other new countries, the labouring population (using the term in its widest sense), bears a larger proportion to the total than is the case in older civilizations where there exists more realized wealth.

In addition to our native-born workers, great numbers of young males and smaller numbers of females, who have nothing to sell but their personal services, immigrate from older countries to Canada to find here a better market for their labour. Thus both the sex distribution and the age distribution of the population of Canada is rendered somewhat abnormal, an unusually large percentage of that population being of working age and of the male sex—that is, of the sex which is most generally gainfully employed.

These statements may be illustrated from the Canadian census of 1911. (See Table 1). In that year out of a total population 10 years old and over of 5,514,388 in the nine provinces, 2,723,634 were returned as gainfully employed, being 49·39 p.c. of such population, or 37·93 p.c. of 7,179,650, the total ascertained population of the nine provinces. Thus, three out of every eight persons in the Dominion were gainfully employed, or four out of every eight persons 10 years old and upwards.

Male Labour.—Considering the male population of 10 years old and upwards, it was found at the census of 1911 that no less than 79·54 p.c., or nearly four-fifths, were gainfully employed. Further, if we take out those under 15 as being more properly at school training for the future than gainfully employed in the present, and those over 65 as having earned the right to rest, we find that of the total male population between 15 and 65 no less than 92·73 p.c. was gainfully employed, a percentage which is increased to 96·28 p.c. if we consider only those in the main productive 40 year period between 25 and 64 years old inclusive. Thus Canada is shown by its statistics to be emphatically, in so far as the males are concerned, a workers' country.

1.—Persons Engaged in Gainful Occupations in Canada, by Ages, 1911.

Age periods.	Males 10 years of age and over.			Females 10 years of age and over.		
	Total number.	Engaged in gainful occupations.		Total number.	Engaged in gainful occupations.	
		Number.	Per cent of total.		Number.	Per cent of total.
10 to 14 years	353,876	17,376	4·91	344,500	7,777	2·26
15 to 24 years	735,071	620,972	84·48	647,874	179,992	27·78
25 to 64 years	1,682,522	1,619,885	96·28	1,384,228	168,034	12·14
65 years and over	194,176	100,580	51·80	172,141	9,018	5·24
Total 10 years and over	**2,965,645**	**2,358,813**	**79·54**	**2,548,743**	**364,821**	**14·31**

Female Labour.—The growth of the employment of females in gainful occupations between 1891 and 1911 is shown in Table 2. The figures found there may be supplemented by the information that in 1891, 11·07 p.c., in 1901, 12·01 p.c., in 1911, 14·31 p.c. of the female population 10 years old and over were gainfully employed—an increase from one-ninth to one-seventh of the female population of these ages during the 20 year period—a rate of increase which, in view of the labour conditions of the war and reconstruction period, will probably be found to have been maintained in the present decade.

It is significant that among females the age period during which there is the maximum of gainful employment is shown by the census to be that from 15 to 24 years inclusive. Of the female population of these ages, 27·78 p.c. were in 1911 gainfully employed, a percentage which fell to 12·14 p.c. for the period 25 to 64 years inclusive. As every employer of female labour knows, the decline is due to the absorption of female labour by marriage and home duties.

2.—Number of Males and Females 10 years of Age and over Engaged in Gainful Occupations, by Provinces, 1881 to 1911.

Provinces.	1881.[1]	1891.		1901.		1911.	
	Male and Female.	Male.	Female.	Male.	Female.	Male.	Female.
	No.	No.	No.	No.	No.	No.	No.
Prince Edward Island	34,094	31,673	4,030	30,113	3,494	27,956	3,950
Nova Scotia	141,526	134,859	22,595	137,566	18,448	148,991	24,370
New Brunswick	105,289	94,261	13,456	98,058	13,807	103,275	16,491
Quebec	425,947	397,438	53,066	434,720	77,245	552,140	101,101
Ontario	625,591	535,765	94,460	645,322	108,625	836,135	154,878
Manitoba	23,162	50,669	4,315	77,418	8,575	155,900	22,206
Saskatchewan	3,993	20,759	994	45,145	2,993	195,247	13,275
Alberta						149,687	11,923
British Columbia	17,983	44,955	3,074	76,541	4,762	189,482	16,627
Canada	**1,377,585**	**1,410,379**	**195,990**	**1,544,883**	**237,949**	**2,358,813**	**364,821**

[1]Workers were not classified by sex in 1881.

Distribution of Labour Force by Industries.—The distribution of the Canadian labour force by industries at the censuses from 1881 to 1911 is given by numbers and percentages employed in Table 3. The most notable features of this table are the great absolute increase of 52·7 p.c. between 1901 and 1911 in the gainfully employed population, the comparative decline of the agriculturists (in spite of the large absolute increase in their numbers), from 48·1 p.c. of the occupied popu-

lation in 1881 to 34·3 p.c. in 1911, the increase of manufacturing workers from 11·7 to 18·0 p.c., of traders from 5·7 to 10·4 p.c. and of transportation workers from 2·9 to 8·0 p.c. of the occupied population in the 30 year period. It should, however, be borne in mind that under present day conditions of specialization in industry many of those employed in trade, transportation and manufactures are doing work which formerly was performed by agriculturists and other primary producers for themselves.

3.—Numbers and Percentage Distribution by Industries of Persons Engaged in Gainful Occupations, 1881 to 1911.

NUMBERS IN EACH INDUSTRY.

Industries.	Workers Engaged.			
	1881.	1891.	1901.	1911.
Agriculture	662,266	725,207	716,860	933,735
Building trades	230,873	185,599	213,307	246,201
Domestic and personal service	90,085	139,929	163,670	214,012
Civil and municipal government	7,938	18,267	17,306	76,604
Fishing and hunting	28,500	30,045	27,225	34,812
Forestry	8,116	12,812	16,764	42,914
Manufactures	161,535	227,080	274,175	491,342
Mining	7,160	16,127	28,650	62,767
Miscellaneous	13,005	–	490	–
Professional	48,461	62,623	83,219	120,616
Trade and merchandising	78,905	109,632	160,410	283,087
Transportation	40,741	69,048	80,756	217,544
Total Workers	**1,377,585**	**1,606,369**	**1,782,832**	**2,723,634**

PERCENTAGES IN EACH INDUSTRY.

Industries.	Workers Engaged.			
	1881.	1891.	1901.	1911.
	p.c.	p.c.	p.c.	p.c.
Agriculture	48·1	45·8	40·2	34·3
Building trades	16·8	11·6	12·0	9·0
Domestic and personal service	6·5	8·7	9·3	7·8
Civil and municipal government	0·6	1·1	1·0	2·8
Fishing and hunting	2·1	1·9	1·5	1·3
Forestry	0·6	0·8	0·9	1·6
Manufactures	11·7	14·1	15·4	18·0
Mining	0·5	1·0	1·6	2·3
Miscellaneous	1·0	–	–	–
Professional	3·5	3·9	4·6	4·5
Trade and merchandising	5·7	6·8	9·0	10·4
Transportation	2·9	4·3	4·5	8·0
Total Workers	**100·0**	**100·0**	**100·0**	**100·0**

Distribution of Labour Force by Provinces.—The extremely varied character of the occupations of the Canadian people, as conditioned by the various utilized natural resources of our immense territory, may be illustrated by reference to Table 4, which shows that in 1911, out of every 1,000 gainfully employed males, the number employed in agriculture varied from 127 in British Columbia to 673 in Saskatchewan and 684 in Prince Edward Island. Only 1 out of every 1,000 gainfully employed males was employed in mining in Prince Edward Island and 3 in Saskatchewan, as compared with 82 in British Columbia and 115 in Nova Scotia. In forestry only 2 out of every 1,000 were employed in Saskatchewan, Manitoba and Prince Edward Island, as compared with 62 in British Columbia. In fishing and hunting, the variation was from 3 per 1,000 in Manitoba to 98 per 1,000

in Nova Scotia. The males gainfully employed in manufacturing industries varied from 35 per 1000 of the occupied population in Saskatchewan to 220 per 1,000 in Ontario. From this widely differing occupational distribution of the population in different parts of the country arise many of the divergencies of interest which are reflected in Canadian social and political life.

The industrial distribution of female labour is considerably more uniform than is the case with male labour, though even here there are great variations. In the largest class, those employed in domestic and personal service vary from 338 per 1,000 in Ontario to 536 in Saskatchewan, while in manufactures they vary from 57 in Saskatchewan to 335 in Quebec. Comparing the sexes, we find an enormously larger percentage of the gainfully employed women than of the gainfully employed men occupied in professional pursuits. Out of the 57,835 women returned as employed in professional pursuits in 1911, no fewer than 34,063 were teachers.

4.—Percentage Distribution by Sexes of the Persons engaged in Gainful Occupations, by Industries and Provinces, 1911.

Occupations.	Male.								
	Prince Edward Island.	Nova Scotia.	New Brunswick.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.
All Industries.	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**
Agriculture	68·4	31·7	43·4	36·5	36·0	44·3	67·3	53·0	12·7
Building trades	6·2	8·4	11·4	12·3	10·0	11·9	7·3	8·1	12·7
Domestic and personal service	1·1	2·0	2·3	3·1	3·1	3·6	2·4	3·5	5·8
Civil and municipal government	0·9	3·0	1·9	3·1	3·0	3·1	2·0	2·8	5·6
Fishing and hunting	4·8	9·8	2·8	0·8	0·4	0·3	0·9	0·6	2·4
Forestry	0·2	2·1	4·3	2·0	1·3	0·2	0·2	0·5	6·2
Manufactures	6·5	14·5	15·7	19·6	22·0	9·5	3·5	5·7	16·7
Mining	0·1	11·5	0·8	1·0	2·0	0·6	0·3	3·5	8·2
Professional	2·2	2·0	2·1	2·9	2·7	3·1	1·9	2·4	3·4
Trade and merchandising	5·6	7·5	7·8	11·2	10·8	13·0	7·0	8·5	10·9
Transportation	4·0	7·5	7·5	7·5	8·7	10·4	7·2	11·4	15·4

Occupations.	Female.								
	Prince Edward Island.	Nova Scotia.	New Brunswick.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.
All Industries.	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**
Agriculture	14·7	6·3	5·5	3·0	3·7	4·1	12·1	10·4	2·4
Building trades	0·1	–	0·1	–	0·1	0·1		0·1	0·1
Domestic and personal service	39·5	46·0	40·3	37·1	33·8	44·9	53·6	46·0	42·0
Civil and municipal government	0·7	0·9	1·0	0·6	1·4	0·9	1·8	1·9	1·1
Fishing and hunting	0·4	0·1	–	–	0·1	–	0·2	–	0·4
Forestry	–	–	–	–	–	–	–	–	–
Manufactures	18·9	18·6	23·8	33·5	30·7	12·7	5·7	8·7	19·6
Mining	–	0·1	–	–	–	–	–	–	0·1
Professional	16·6	16·6	18·1	15·2	14·5	19·4	18·0	20·7	19·5
Trade and marchandising	8·6	10·0	10·0	9·0	13·8	14·0	7·4	10·4	12·2
Transportation	0·5	1·4	1·2	1·6	1·9	3·9	1·2	1·8	2·6

Distribution of Labour Force by Nativity.—While at the census of 1911, those born outside of Canada constituted approximately only 22 p.c. of the total population, these 22 p.c., because they contained a large proportion of young, strong males, contributed no less than 31·91 p.c. of those engaged in gainful occu-

pations. As is shown in Table 5, they constituted even a larger proportion of those engaged in domestic and personal service, in civil and municipal government, in mining and transportation, while they fell short of reaching their general proportion to the occupied population in agriculture, forestry, fishing and hunting—that is, in all the primary industries except mining.

5.—Numbers and Percentage Distribution by Nativity, Sex and Industries, of Persons engaged in Gainful Occupations, 1911.

NUMBERS.

Occupations.	Total Workers.		Male Workers.		Female Workers.	
	Male.	Female.	Born in Canada.	Born outside of Canada.	Born in Canada.	Born outside of Canada.
Agriculture	917,848	15,887	667,207	250,641	11,954	3,933
Building trades	245,990	211	157,274	88,716	176	35
Domestic and personal service	75,133	138,879	38,597	36,536	90,904	47,975
Civil and municipal government	72,531	4,073	40,356	32,175	3,522	551
Fishing and hunting	34,547	265	31,601	2,946	258	7
Forestry	42,901	13	31,403	11,498	8	5
Manufactures	392,781	98,561	253,882	138,899	81,240	17,321
Mining	62,706	61	29,890	32,816	51	10
Professional	62,781	57,835	43,811	18,970	49,862	7,973
Trade and merchandising	240,903	42,184	167,289	73,614	34,471	7,713
Transportation	210,692	6,852	115,143	95,549	5,539	1,313
All Occupations	**2,358,813**	**364,821**	**1,576,453**	**782,360**	**277,985**	**86,836**

PERCENTAGES.

Occupations.	Total Workers.		Male Workers.		Female Workers.	
	Male.	Female.	Born in Canada.	Born outside of Canada.	Born in Canada.	Born outside of Canada.
Agriculture	98·30	1·70	72·69	27·31	75·24	24·76
Building trades	99·91	0·09	63·94	36·06	83·41	16·59
Domestic and personal service	35·10	64·89	51·37	48·63	65·45	34·55
Civil and municipal government	94·68	5·32	55·64	44·36	86·47	13·53
Fishing and hunting	99·24	0·76	91·47	8·53	97·35	2·65
Forestry	99·97	0·03	73·20	26·80	61·54	38·46
Manufactures	79·94	20·06	64·64	35·36	82·43	17·57
Mining	99·90	0·09	47·67	52·33	83·60	16·40
Professional	52·05	47·95	69·78	30·22	86·21	13·79
Trade and merchandising	85·09	14·91	69·44	30·56	81·72	18·28
Transportation	96·85	3·15	54·65	45·35	80·84	19·16
All Occupations	**86·61**	**13·39**	**66·83**	**33·17**	**76·20**	**23·80**

2.—Dominion Department of Labour.

The Department of Labour of the Dominion Government was established in 1900 under the authority of the Conciliation Act, 1900 (63-64 Vict., c. 24). Its chief duties originally comprised the administration of certain provisions of this statute designed to aid in the prevention and settlement of labour disputes, the administration of the Government's fair wage policy for the protection of workmen employed on the Dominion Government contracts and works aided by grant of public funds, the collection and classification of statistical and other information relative to conditions of labour, and the publication of a monthly periodical known as the "Labour Gazette." From 1900 to 1909, the Department was administered by the Postmaster General, who was also Minister of Labour. It was constituted a separate Department under the Labour Department Act, 1909 (8-9 Edw. VII, c. 22).

The work of the Department was greatly increased in 1907 by the passage of the Industrial Disputes Investigation Act, 1907 (6-7 Edw. VII, c. 20). The Department is also charged with the administration of an Act passed in 1918 known as the Employment Offices Co-ordination Act (8-9 Geo. V, c. 21), and of the Technical Education Act, enacted in 1919 (9-10 Geo. V, c. 73). The scope of the Department has increased in other directions, especially in the investigation of questions relating to the cost of living.

Industrial Disputes Investigation Act.—The Industrial Disputes Investigation Act, 1907, (6-7 Edw. VII, c. 20), has attracted considerable favourable attention from legislators and publicists throughout the world. It distinctly forbids strikes or lockouts in industrial disputes affecting mines and public utilities, until the matters in dispute have been dealt with by a Board of Conciliation and Investigation, consisting of three members, two appointed by the Minister of Labour on the recommendation of the respective parties to the dispute, the third on the recommendation of the first two, or if they fail to agree, by the Minister himself. After their report has been made, either of the parties to the dispute may reject it and declare a strike or lockout, a course adopted, however, only in a small percentage of cases. The machinery of the Act may be extended to other industries with the consent of the parties concerned.

A review of the proceedings under the Industrial Disputes Investigation Act from its enactment in March, 1907, to March 31, 1923, shows that, in the 16 years, 597 applications were received for the establishment of boards of conciliation and investigation, as a result of which 428 boards were established. In all but 37 cases strikes (or lockouts) were averted or ended. In the fiscal year ended March 31, 1923, 39 applications for the establishment of boards of conciliation and investigation were received, and 27 boards were established. Strikes (or lockouts) were averted in all but three cases.

Fair Wages Branch.—The Fair Wages Branch of the Department of Labour is charged with the preparation of schedules of minimum wage rates, which are inserted in Dominion Government contracts, and must be adhered to by contractors in the execution of the respective works. The number of fair wages schedules prepared since the adoption of the Fair Wages Resolution in 1900 up to the end of the calendar year 1922 is 3,994. The number of fair wages schedules and clauses furnished during the year 1922 is 64.

Fair wage conditions are also inserted in contracts for the manufacture of certain classes of government supplies, and in contracts for all railway construction to which the Dominion Government has granted financial aid, either by way of subsidy or guarantee.

The Department of Labour is also frequently consulted by other departments of the Government regarding the wage rates to be observed in connection with work undertaken on the day labour plan.

An order-in-council of June 7, 1922, provided more effective measures to secure the observance of the fair wages policy of the Government of Canada.

Labour Gazette.—A monthly publication, known as the Labour Gazette, has been issued by the Department of Labour since the establishment of the Department in 1900. It contains a monthly review of the industrial situation in Canada and of the state of employment, including reports of the operations of the Employment Service of Canada in the various provinces, also information relative to labour legislation, wages, rates and hours of labour, wholesale and retail prices of staple commodities in Canada and other countries, labour disputes (including the pro-

ceedings under the Industrial Disputes Investigation Act), industrial accidents, legal decisions affecting labour, industrial training and technical education, and other matters of general or current industrial interest. The Labour Gazette is widely distributed throughout Canada and the statistical and other information contained therein is constantly used in connection with wages and other relations between employers and workers. A subscription charge of 20c. per annum is made for this publication.

Labour Legislation.—Much attention is devoted to labour legislation. Information as to new laws enacted by the Dominion and the Provinces is kept up to date, while notes or articles regarding their provisions are published in the "Labour Gazette." Since 1917, the Department has published annual reports containing the text of Canadian labour laws enacted during the year, together with an introduction summarizing this legislation under subject headings. These reports are based on a consolidation of Dominion and Provincial labour legislation as existing at the end of 1915, which was made from the most recent Revised Statutes and the subsequent annual volumes of statutes up to 1915, and which formed the Department's report on labour legislation for 1915. Reports on the labour laws enacted in the four subsequent years were published in regular order. The report for 1920 is similar to that for 1915, being a consolidation of Canadian labour legislation as existing at the end of 1920. Reports supplementary to the 1920 volume were published for the calendar years 1921 and 1922.

The advantage of uniformity in the laws relating to the welfare of persons engaged in industrial work in the several provinces was pointed out in 1919 by the Royal Commission on Industrial Relations. This view was supported by a resolution of the National Industrial Conference held in September, 1919. A commission was established in 1920, composed of representatives of the Dominion and Provincial Governments and of employers and workers respectively, to consider the foregoing subject. This commission met in Ottawa between April 26 and May 1, 1920, and formulated recommendations looking to greater uniformity in the provincial laws relative to workmen's compensation, factory control, mining, and minimum wages for women and girls.

Joint Industrial Councils.—One section of the report of the Royal Commission of 1919 on Industrial Relations, related to shop committees and industrial councils. The Commissioners strongly urged the adoption in Canada of the principles underlying the Whitley Councils and other kindred systems. The subject was discussed also at the National Industrial Conference, held at Ottawa in September, 1919. The committee to which the matter was referred reported unanimously in the following terms:—

> "Your committee is of the opinion that there is urgent necessity for greater co-operation between employer and employee. We believe that this co-operation can be furthered by the establishment of Joint Industrial Councils. Your Committee does not believe it is wise or expedient to recommend any set plan for such Councils.
>
> "We therefore recommend that a Bureau should be established by the Department of Labour of the Federal Government to gather data and furnish information whenever requested by employers and employees or organizations of employers or employees that whenever it is desired to voluntarily establish such councils the fullest assistance should be given by the Bureau."

While it has not been deemed necessary nor desirable at the present time to establish a bureau for the purposes outlined in the resolution of the National Conference, the department has entered heartily into the spirit of the resolution, and has continued and extended its study of joint industrial councils and kindred systems.

Employers throughout Canada, at the request of the department, have furnished information regarding joint councils or committees in their establishments, and the information thus received, together with information regarding similar systems in other countries, has been assembled and published in the form of a special bulletin. A small appropriation is provided in the estimates of the Department of Labour to permit of assistance in the formation of joint industrial councils.

3.—Canada and the International Labour Organization.[1]

The International Labour Organization was set up in accordance with Part XIII of the Treaty of Versailles. The general object of the Organization is given in the preamble to that document:—

"Whereas the League of Nations has for its object the establishment of universal peace, and such a peace can be established only if it is based upon social justice;

"And whereas conditions of labour exist involving such injustice, hardship and privation to large numbers of people as to produce unrest so great that the peace and harmony of the world are imperilled; and an improvement of those conditions is urgently required; as for example, by the regulation of the hours of work, including the establishment of a maximum working day and week, the regulation of the labour supply, the prevention of unemployment, the provision of an adequate living wage, the protection of the worker against sickness, disease and injury arising out of his employment, the protection of children, young persons and women, provision for old age and injury, protection of the interests of workers when employed in countries other than their own, recognition of the principle of freedom of association, the organization of vocational and technical education and other measures;

"Whereas also the failure of any nation to adopt humane conditions of labour is an obstacle in the way of other nations which desire to improve the conditions in their own countries;

"The High Contracting Parties, moved by sentiments of justice and humanity as well as by the desire to secure the permanent peace of the world, agree to the following."

The scheme of organization provides for an International Labour Conference to be held at least once a year and a permanent International Labour Office.

The International Labour Conference is composed of four delegates from each Member of the Organization, two representatives of the government, one of the employers and one of the workpeople. Its task is to consider proposals dealing with questions similar to those laid down in the preamble, and to embody its findings in draft conventions or recommendations. Each Member binds itself to bring such of these conventions and recommendations as are adopted by a two-thirds majority of the Conference before the competent authority or authorities. The authority has complete liberty to decide whether or not it will ratify any or all of these conventions, and what action, if any, it will take on the recommendations.

It is of special interest to Canada that the Treaty recognizes the limited power of a federal government, and provides that in the case of a federal state, the authority of which to enter into conventions on labour matters is limited, the federal government may treat a draft convention as a recommendation only.

Article 396 of the Treaty states that "the functions of the International Labour Office shall include the collection and distribution of information on all subjects relating to the international adjustment of conditions of industrial life and labour, and particularly the examination of subjects which it is proposed to bring before the Conference, with a view to the conclusion of international conventions and the conduct of such special investigations as may be ordered by the Conference."

[1] Contributed by the Department of Labour, Ottawa.

The International Labour Office is required to collect all available information in regard to the problems to be dealt with, and to prepare draft conventions or recommendations for submission to the Conference. The work of the Office has been divided, for the proper performance of its duties, into two divisions, namely: the Diplomatic Division, which conducts the correspondence with Governments and is called upon to deal "with the questions connected with the obligations entailed by the labour provisions of the Treaty and in particular with those relating to the work of the International Labour Conference," and the Scientific Division, which is "responsible for the collection, compilation and dissemination of information of international interest and importance about industry and labour conditions in all countries." Technical services have been created to supply the necessary information on technical questions such as maritime problems, industrial hygiene, employment and unemployment, hours of labour, agriculture, alien labour, employment of women, home work, wages, social insurance, education and co-operation.

The International Labour Office is under the direction of a governing body composed of twenty-four persons elected by the International Labour Conference. Of these, twelve are persons representing governments, six representing employers and six representing workers. Under the terms of Article 393, eight of the government seats on the governing body are held by the countries of "chief industrial importance." Canada was designated by the Council of the League of Nations as one of the eight countries of "chief industrial importance," and Hon. James Murdock, Minister of Labour, was designated in January, 1922, by the Government of Canada as its representative on the governing body. Mr. P. M. Draper, secretary of the Trades and Labour Congress of Canada, was chosen at the first session of the International Labour Conference (1919) as one of the six workers' representatives on the governing body. At the election held in 1922, Mr. Tom Moore, president of the Trades and Labour Congress of Canada, was elected to the seat previously held by Mr. Draper.

The proceedings of the first three sessions of the International Labour Conference have been described in the 1921 Year Book (see pp. 608-609).

The fourth session of the International Labour Conference was held at Geneva from Oct. 18 to Nov. 3, 1922, the Canadian Government being represented by the Minister of Labour and the Minister of Marine and Fisheries. The employers' delegate, appointed on the nomination of the Canadian Manufacturers' Association, was Mr. W. C. Coulter of the Booth-Coulter Copper and Brass Company, Ltd., Toronto. The workers' delegate was Mr. Tom Moore, Ottawa, president of the Trades and Labour Congress of Canada.

Consideration, first by the various committees that had been formed and subsequently by the general conference, resulted in the adoption of various resolutions, among which was an amendment increasing the number of members of the governing body from twenty-four to thirty-two persons. A recommendation calling for the furnishing to the International Labour Office of statistical and other information respecting emigration, immigration and the transit of emigrants and immigrants, was adopted; the use of uniform methods of recording statistical data on emigration and immigration was also recommended. It was decided to extend the work of improving national and co-ordinating international statistics of unemployment, to consider the periodical publication of these investigations, and to investigate especially the causes and remedies of seasonal unemployment. It was further resolved that the International Labour Office, in collaboration with the Economic and Financial Section of the League of Nations, should make a special study of the

crises of unemployment, their recurrences and the fluctuations of economic activity. Several other resolutions dealing with the constitution and working of the International Labour Conference were also passed.

On receipt from the Secretary-General of the League of Nations of the draft conventions and recommendations of these four International Labour Conferences, they were referred to the Department of Justice for examination as to the legislative authority of the Dominion and the provinces to deal with the subject matters in question. Certain of the draft conventions and recommendations were found to be within provincial authority and were accordingly referred to the Provincial Governments, whilst those within federal jurisdiction are engaging the attention of the Dominion Government and have also been brought before Parliament.

To date (June 13, 1923) the results attained in the execution of the draft conventions and recommendations adopted by the International Labour Conference are as follows: 73 ratifications registered by the Secretary-General; 12 countries have notified their adherence to the Berne Convention on white phosphorus since the Washington Conference; 16 ratifications authorized by the competent authority but not yet communicated; 94 ratifications recommended to the competent authority by the Government, but approval not yet signified; 98 measures finally adopted by legislative authorities, and measures of an administrative character, giving effect partially or wholly to the provisions of the draft conventions or recommendations; and 68 legislative measures of all descriptions proposed but not yet wholly adopted, which are intended to give effect partially or wholly to the provisions of the draft conventions and recommendations.

Dominion-Provincial Conference Relative to Obligations of Canada under Labour Sections of Peace Treaties.

A conference of representatives of the Dominion and Provincial Governments was held in the Parliament Buildings, Ottawa, on September 24-26, 1923, for the consideration of the obligations of Canada arising out of the labour sections of the treaties of peace. The meeting was called by the Prime Minister of Canada in conformity with the wishes of the Provincial Governments, with the object of an exchange of views and for consultation *re* various proposals of legislative action which had been adopted by the International Labour Conference (League of Nations) in the form of draft conventions and recommendations and had been deemed by the law officers of the Crown in Canada to deal with subjects within provincial legislative control. The meeting was purely consultative in character. The Hon. James Murdock, Dominion Minister of Labour, acted as Chairman, and representatives of all the Provinces but Prince Edward Island and British Columbia were in attendance. Information on the existing legislation of various provinces on the subject matters of the agenda was submitted to the Conference. These agenda comprised twenty-one items in all, on most of which unanimous resolutions were adopted and transmitted to the respective Provincial Governments for their attention.

The agenda included proposals emanating from the first, second and third International Labour Conference, concerning hours of labour, unemployment, employment of women and children, lead poisoning, minimum wage laws and the weekly rest in commerce and industry.

The draft convention respecting hours of work called for the adoption of an eight hour day and a forty-eight hour week. It was agreed that the Dominion Department of Labour should make a survey of the position of the eight hour day

movement in Canada and the information obtained should be submitted to the Provincial Governments for consideration. The recommendation concerning unemployment contained four articles *re* prohibiting the operation of private employment offices, permitting the recruiting of workers in foreign countries by mutual agreement, providing for the introduction of a system of unemployment insurance and for the co-ordination of public works with a view to the avoidance of unemployment. The Conference concurred in Article 1 of this recommendation; all provinces except New Brunswick have eliminated private employment offices by law and in New Brunswick similar legislation is to be considered at the next session of the Legislature. It was resolved by the Conference that consistent recognition should be given to the intent of the recommendation in Article 2. No action was taken on Article 3, while the Conference concurred in the recommendation in Article 4. With respect to the recommendation concerning the employment of women before and after childbirth, it was resolved that the matter is not a live question in Canada, being satisfactorily taken care of by local regulations. It was resolved that the provisions of the draft convention forbidding the employment of women during the night be accepted as a basis for securing uniform legislation within each province, the term " night " in this case signifying a period of at least eleven consecutive hours, including the interval between 10 p.m. and 5 a.m. The draft convention forbidding the employment of children under fourteen in industrial undertakings was concurred in by the Conference. It was resolved that a general survey be made by the provinces, in co-operation with the Dominion Department of Labour, respecting the employment of young persons in industry at night, the result of this survey to be submitted to a further conference and to the various provinces.

The proposals emanating from the second International Labour Conference dealt with the limiting of the hours of work in the fishing industry; consideration of this matter was deferred, pending action that may be taken in regard to the eight hour day in commerce and industry.

The proposals emanating from the third International Labour Conference dealt with unemployment and employment conditions in agriculture. It was decided that these draft conventions had on the whole but slight application to Canada.

A resolution was passed directing that a survey be made by the provinces concerning the use of white lead in painting.

At the request of the Minimum Wage Board of Ontario, certain proposals regarding uniformity and co-ordination among the several provincial minimum wage laws had been included in the conference agenda. A resolution was passed commending to the various provinces consideration of the adoption of uniform minimum wage laws for female workers.

The principle of the draft convention concerning the provision of a weekly rest in industry and commercial establishments was approved, and it was suggested that the Dominion Government, within whose jurisdiction the matter falls, take necessary steps to ensure ratification, after consultation with the Attorneys-General of the various provinces.

4.—Organized Labour in Canada.

The Department of Labour publishes an annual report on Labour Organization in Canada, which sets out the various branches of unionism existing in Canada, the principles on which they are respectively founded, their chief activities, and statistics of the different groups comprising the trade union movement of the Dominion.

Reference is also made in this annual report to the principal international labour organizations with which the organized workers in Canada are affiliated.

Trade unionism in Canada occupies a unique position, by reason of the fact that most organized workers in the Dominion are members of organizations whose headquarters are located in a foreign country, viz.: the United States. This condition is explained when it is understood that workers move freely from one country to the other in order to find employment. In years gone by Canadian workmen who sought a livelihood in the United States greatly outnumbered those from the latter country who came to Canada. As industry was further developed in the United States, there arose a number of unions of various crafts, and with these the Canadian workers soon became affiliated. With the development of industry in the Dominion many of these Canadians subsequently returned to their native land, bringing with them the gospel of trade unionism and collective bargaining as a means of protecting their rights. In many instances these trade unionists became the nuclei of strong bodies of organized labourers formed in Canadian cities.

In the early part of the nineteenth century, a number of independent trade associations were formed in Canada, the earliest of which there is record being a printers' organization in Quebec city in 1827. The first union known to have been organized in the province of Ontario was also composed of printers, and operated in York (now Toronto), as early as 1834; both of these bodies were later superseded by branches of the International Typographical Union, which body in 1869 changed its name from National Typographical Union of the United States, on account of the inclusion of Canadian branches.

In 1851 a branch of the Amalgamated Society of Engineers, a British organization composed of metal mechanics, was established in Toronto. In the years immediately following other branches were organized in other Canadian cities, the society having the whole Dominion for its operations. In 1888 the United Machinists and Mechanical Engineers of America was formed, and entered the field as a competitor for the organization of the craftsmen eligible for membership in the Amalgamated Society. The first Canadian lodge (No. 103) of the new body was formed in Stratford, Ont., in 1890, while lodges in Montreal (No. 111) and in Winnipeg (No. 122) were organized before the close of the same year. To meet the extension of the jurisdiction into Canada the name of the organization was changed in 1891 to the International Association of Machinists. Since that time the organization has added greatly to its Canadian following, having at the close of the year 1922, 93 local lodges with a combined membership of 8,400. On the other hand, the Amalgamated Society never added very greatly to its Canadian following, the largest number of local branches and members on record being in 1919, when they stood at 24 and 3,000 respectively. Negotiations were opened in 1919 by the general officers of the Amalgamated Society of Engineers and the International Association of Machinists, with a view to effecting an amalgamation. As a result the Amalgamated Society on Sept. 30, 1920, withdrew its operations from Canada and also from the United States, where branches were also in existence, leaving the whole North American continent to the International Association of Machinists. Another British labour organization to establish branches in Canada was the Amalgamated Society of Carpenters and Joiners, now the Amalgamated Society of Woodworkers, which in 1860 chartered a branch in Toronto, twenty-one years before the United Brotherhood of Carpenters and Joiners, now the chief organization in North America of the craft came into existence. In this case also, bickerings finally led to a unification whereby the members of the Amalgamated Society became also mem-

bers of the United, retaining their connection with the parent body for its beneficial features. In 1922, owing to a decision of the United Brotherhood which inhibited members of local branches of the Amalgamated Society from holding certain official positions in district councils, and also to the refusal of the United Brotherhood to grant charters to local branches of the Amalgamated formed subsequently to the plan of unification becoming effective, a division occurred, and the eleven unrecognized branches of the Amalgamated Society are now operating independently of the United Brotherhood, with which, however, nineteen Amalgamated branches are still connected. The only other branch of a British labour organization in Canada is a lodge in Hazelhill, N.S., of the Association of Wireless and Cable Telegraphers. With the practical elimination of the British organizations, the North American field has been left entirely to the labour organizations originating on this continent. These labour bodies are for the most part in affiliation with the American Federation of Labour, which, in addition to dealing with trade matters, speaks for the organized workers in the United States on the subject of legislation. In Canada the legislative mouthpiece of organized labour is the Trades and Labour Congress, which body is strongly representative of the international labour movement, its affiliated membership being largely drawn from international organizations which have in the first place been affiliated with the American Federation of Labour. Under the travelling card system now in vogue, members of the respective unions move as they desire between the two countries and are entitled to all rights and privileges established in the various localities where local branches are in existence. Canadian members of international organizations are eligible for the highest offices in the gift of their organizations, and in some instances have been elected to these posts.

In addition to the international trade union membership in Canada, there are labour bodies which are termed non-international. Some of these organizations were formed by former members of international unions, who for various reasons severed their connection with the parent bodies. There are also a number of independent labour unions in the Dominion, their origin in a few instances being an outcome of grievances against their central organizations not being settled to the satisfaction of the complaining branches.

A statement of the development of organized labour in Canada would not be complete without a reference to the Knights of Labour, an organization formed in the United States in 1869, to which all classes of workers were admitted. The Knights of Labour, which in 1885 reached its greatest numerical strength with about a million members, extended its jurisdiction into Canada, establishing district and local assemblies in many localities in the Dominion, seventeen of which were operating in 1891 in the province of Quebec. Soon after the latter date, internal dissension took place in the ranks of the organization, owing to the difficulty of uniting workers of different crafts in one body. The international craft organizations, which had in the meantime become united under the banner of the American Federation of Labour, formed in 1881, offered strong opposition to the Knights of Labour, which in a few years ceased to be a factor in the labour movement of the continent. All of its Canadian "Assemblies" have long since passed out of existence.

Trades and Labour Congress of Canada.—Through the initiative of the Toronto Trades Assembly (now the Toronto District Trades and Labour Council) the first national labour organization, the Canadian Labour Union, was formed in Toronto in September, 1873. The organization held its second and third annual meetings in 1874 and 1875, but disappeared as a result of the serious depression

of the later 70's. In 1883 the Trades and Labour Council of Toronto, feeling the necessity of the wage earners of Canada having a medium through which to express their opinions, assumed the responsibility of calling another trades and labour congress, which met in Toronto on Dec. 26, with 45 delegates. On the summons of the Toronto council, a second meeting, with 109 delegates, assembled on Sept. 14, 1886, the first occasion on which any labour body outside of the province of Ontario was represented. A permanent organization was effected at this meeting under the name of "Trades and Labour Congress of the Dominion of Canada." This was the title of the organization until 1895, when the title "Trades and Labour Congress of Canada" was adopted in preference to "Canadian Federation of Labour." Since 1886 conventions have been held annually, the 1922 meeting in Montreal being counted as the thirty-eighth. The Trades and Labour Congress is representative of international trade unionism in the Dominion, the bulk of its membership being drawn from the international organizations which have local branches in Canada. According to reports for 1922 the congress received payment of *per capita* tax from 57 international bodies and three national organizations which had their entire membership in the Dominion, numbering 122,723, in 1,715 local branches. With other affiliations and unions directly under charter, the congress had in all at the close of 1922 a membership of 132,071, in 1,771 branches.

Membership of International Organizations in Canada.—At the close of 1922 there were 92 international organizations having one or more local branch unions in Canada, six fewer than in 1921. These bodies between them had 2,108 local branches in the Dominion with 206,150 members, a decline of 115 branches and 16,746 members as compared with the previous year. The international organizations represent 74 per cent of the total of all classes of workers in the Dominion organized under trade union auspices.

Canadian Federation of Labour.—The Canadian Federation of Labour was organized in 1902 under the name of National Trades and Labour Congress, as the result of the expulsion from the Trades and Labour Congress of Canada of the Knights of Labour assemblies and all other unions which were composed of members of crafts over which existing international organizations claimed jurisdiction. The delegates of the expelled unions forthwith formed a new central body of a distinctively national character, which in 1908 adopted its present name. For a number of years labour bodies in the province of Quebec were the main support of the new organization. Gradually the Quebec affiliations dropped off and the centre of activity was a few years ago shifted to Toronto. The membership of the Federation at the close of 1922 stood at 3,930, comprised in 19 directly chartered local branches. Three central bodies are also affiliated with the Federation, the membership of which, as well as that of the directly chartered locals here enumerated, is included in the standing of the non-international trade union membership.

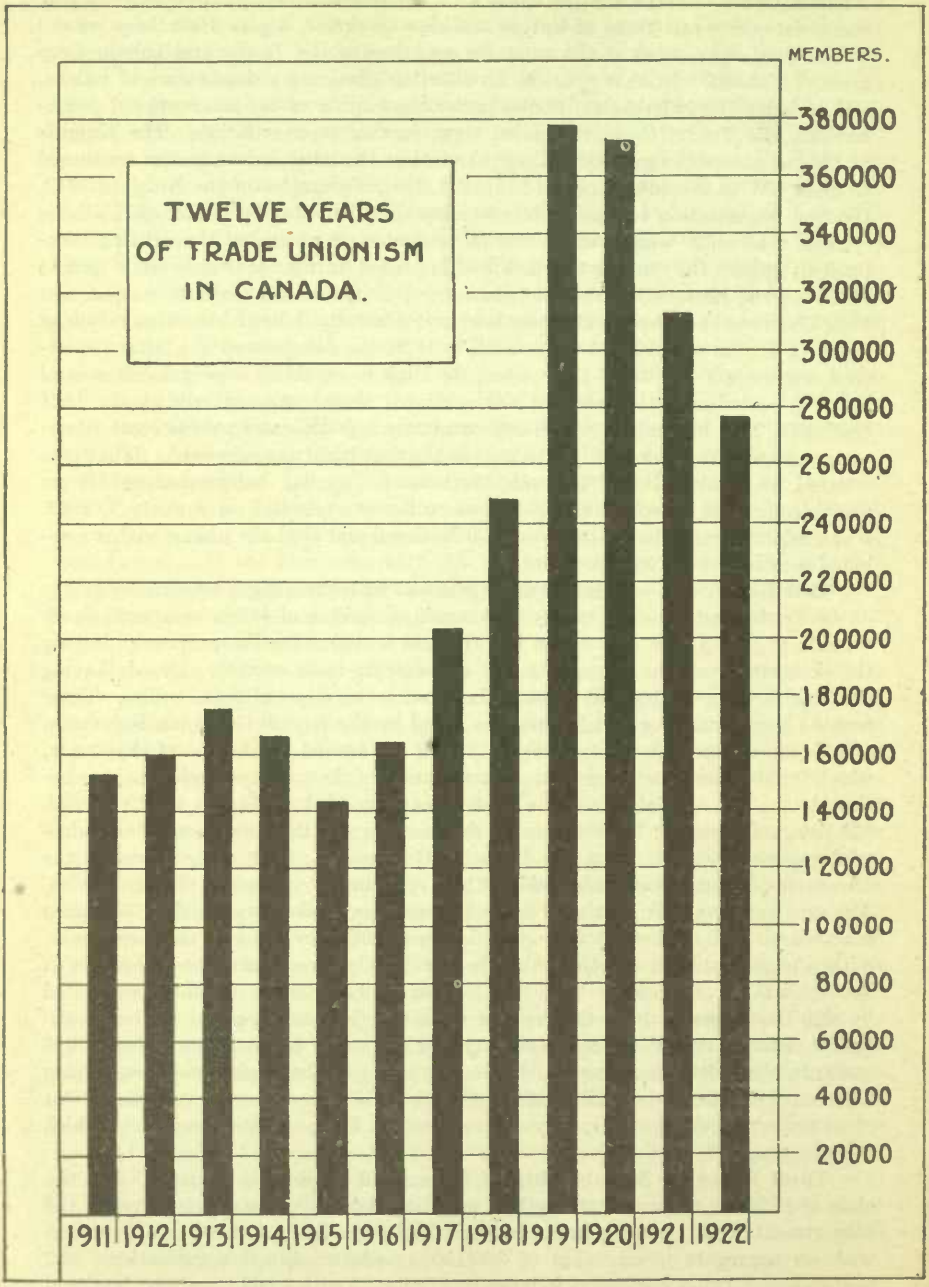
Non-international Trade Union Membership.—There are in Canada eighteen organizations of wage earners termed non-international unions, eleven of which are in direct opposition to the international organizations. In some instances these non-international bodies have been formed by secessionists from international unions. The combined membership of the non-international organizations is 22,973, comprised in 273 local branches.

Membership of Independent Units.—There are 25 independent local labour bodies in the Dominion, 19 of which have a membership of 9,063. The remaining six have not reported as to their standing.

Federation of Catholic Workers of Canada.—During the period that the Knights of Labour operated in Quebec there existed also four independent unions, one of labourers and three of leather and shoe workers. Up to 1902 these several bodies were represented at the annual conventions of the Trades and Labour Congress of Canada. In that year, in an effort to eliminate a duplication of unions, and to bring the independent bodies under the banner of the international organizations, the Trades Congress denied them further representation. The Knights of Labour assemblies gradually disappeared, but the independent unions continued to exist. With the advent of the Mutual Labour Federation of the North in 1912, the first organization to confine membership to adherents of the Roman Catholic church, a stimulus was given to this movement, and several of the existing independent unions, the number of which had increased during the decade from 1902 to 1912, became identified with what are termed National and Catholic unions. In 1918 a conference of these bodies was held in Quebec city, followed by other meetings in Three Rivers in 1919 and Chicoutimi in 1920, the delegates at the latter conference, numbering 225 from 120 unions, deciding to establish a permanent central body to co-ordinate the work of the scattered units. Accordingly at the 1921 conference held in Hull, at which approximately 200 delegates were present, representing 89 unions, a constitution to govern the new body was approved. The name selected was Federation of Catholic Workers of Canada, and permanent officers were elected, the constitution and bylaws to become effective on January 1, 1922. From information at hand, there are 106 National and Catholic unions with a combined membership of 38,335.

One Big Union.—Owing to dissatisfaction with the alleged reactionary policy of the Trades and Labour Congress of Canada, a number of delegates from Western Canada to the Quebec convention in 1918 held a caucus for the purpose of having the delegates from the western unions concentrate their energies towards having the Trades Congress legislate in accordance with the views of these bodies. Some months later a meeting of delegates was called by the British Columbia Federation of Labour, to assemble immediately following the annual convention of that body, which for the first time in its history met outside of the province under its jurisdiction, in the city of Calgary. The conference assembled on March 13, 1919, with 239 delegates present; the outcome of the meeting was the formation of an industrial organization, the "One Big Union." On June 11, 1919, a conference of the advocates of the new body was held in Calgary to further the plans of organization. The next meeting, termed the first semi-annual convention, was held in Winnipeg in January, 1920. The O.B.U. had made much progress during its short existence, with a membership of 41,150 at the close of 1919. From the outset, the O.B.U. met with much opposition from the old-established labour unions represented by the Trades and Labour Congress of Canada, which are opposed to the substitution of industrial unionism for the existing system of craft unions. From 1920 onwards, the O.B.U. has been on the decline, many of the original members having deserted the organization and re-affiliated with their respective parent bodies. Out of 34 units recorded in 1921, only one reported in 1922, the membership of which was given as 100.

Total Reported Membership of Organized Labour in Canada.—At the close of 1922 the numerical strength of organized labour in Canada is given by the Department of Labour as follows: International organizations, 2,108 local branches with an aggregate membership of 206,150; non-international organizations, 272 branches and 22,973 members; independent units, 25 with 9,063 members; National



MEMBERS OF TRADE UNIONS IN CANADA, 1911-1922

and Catholic unions, 106 with 38,335 members; and One Big Union, 1 unit, with 100 members. Grand total, 2,512 local branches and 276,621 members, decreases as compared with 1921 of 156 branches and 36,699 members.

Table 6 shows by years the membership of trade unions in Canada since 1911.

6.—Membership of Trade Unions in Canada, 1911-1922.

Years.	Members.	Years.	Members.
1911	133,132	1917	204,630
1912	160,120	1918	248,887
1913	175,799	1919	378,047
1914	166,163	1920	373,842
1915	143,343	1921	313,320
1916	160,407	1922	276,621

International Trade Unions Operating in Canada.—Table 7 gives the names of the 92 international labour organizations which have extended their operations into Canada, and contains (1) the number of branches which were in existence in the Dominion at the close of 1922 and (2) the reported membership.

7.—International Trade Unions Operating in Canada.

NUMBER OF BRANCHES AND NUMBER OF MEMBERS IN CANADA, DECEMBER, 1922.

International Organizations.	Number of Branches in Canada.	Reported Membership in Canada.
American Federation of Labour	16	1,084
Asbestos Workers, International Association of Heat and Frost Insulators, and	3	111
Bakery and Confectionery Workers' International Union of America	8	285
Barbers' International Union of America, Journeymen	35	1,300
Bill Posters and Billers of America, International Alliance of	2	150
Blacksmiths, Drop Forgers and Helpers, International Brotherhood of	23	2,700
Boilermakers, Iron Shipbuilders and Helpers, International Brotherhood of	38	2,910
Bookbinders, International Brotherhood of	12	482
Boot and Shoe Workers' Union	17	1,641
Brewery, Flour, Cereal and Soft Drink Workers, International Union of the United	16	535
Bricklayers, Masons and Plasterers' International Union of America	51	3,771
Bridge, Structural and Ornamental Iron Workers, International Association of	14	2,215
Broom and Whisk Makers' Union, International	2	36
Carpenters and Joiners, Amalgamated Society of	11	825
Carpenters and Joiners of America, United Brotherhood of	119	8,326
Carvers' Association of America, International Wood	1	20
Cigarmakers' International Union of America	12	600
Cloth Hat and Cap Makers of America, United	3	555
Clothing Workers of America, Amalgamated	14	9,750
Commercial Telegraphers' Union of America	8	1,800
Conductors, Order of Sleeping Car	1	14
Coopers' International Union of North America	1	20
Electrical Workers, International Brotherhood of	39	4,115
Elevator Constructors, International Union of	1	30
Federal Employees, National Federation of	1	163
Fire Fighters, International Association of	14	2,000
Fur Workers' Union, International	6	380
Garment Workers of America, United	11	700
Garment Workers' Union, International Ladies'	7	1,105
Glass Bottle Blowers' Association of the United States and Canada	4	248
Glass Workers' Union, American Flint	3	177
Granite Cutters' International Association of America	4	150

7.—International Trade Unions Operating in Canada—concluded.

International Organizations.	Number of Branches in Canada.	Reported Membership in Canada.
Hod Carriers, Building and Common Labourers' Union of America, International	2	376
Hotel and Restaurant Employees' International Alliance and Bartenders' International League of America	11	1,116
Iron, Steel and Tin Workers, Amalgamated Association of	11	1,200
Jewelry Workers' Union, International	6	1,510
Lathers, International Union of Wood, Wire and Metal	6	127
Laundry Workers' International Union	1	75
Leather Workers' International Union, United	2	50
Lithographers of America, Amalgamated	7	450
Longshoremen's Association, International	20	2,313
Locomotive Engineers, Brotherhood of	96	7,500
Locomotive Firemen and Enginemen, Brotherhood of	102	7,593
Machinists, International Association of	93	8,400
Maintenance-of-Way Employees and Railway Shop Labourers, United Brotherhood of	183	10,000
Meat Cutters and Butcher Workmen, Amalgamated	2	145
Metal Polishers' International Union	7	115
Metal Workers' International Alliance, Amalgamated Sheet	9	600
Mine Workers of America, United	71	22,500
Mine, Mill and Smelter Workers, International Union of	7	275
Moulders' Union of North America	38	2,040
Musicians, American Federation of	46	7,152
Painters, Decorators and Paperhangers of America, Brotherhood of	34	1,339
Papermakers, International Brotherhood of	15	1,073
Pattern Makers' League of North America	14	425
Paving Cutters' Union of the United States and Canada	7	200
Photo Engravers' Union of North America, International	5	315
Piano, Organ and Musical Instrument Workers' International Union	1	26
Plasterers and Cement Finishers' International Association, Operative	15	941
Plumbers, Gas and Steam Fitters, United Association of	39	2,850
Potters, National Brotherhood of Operative	1	36
Printers and Die Stampers' Union, International Plate	1	48
Printing Pressmen and Assistants' Union, International	16	745
Pulp, Sulphite and Paper Mill Workers of the United States and Canada, International Brotherhood of	15	4,000
Quarry Workers' International Union of North America	2	300
Railroad Employees, Canadian Brotherhood of	148	12,567
Railroad Signalmen of America, Brotherhood of	2	71
Railroad Stationmen and Railroad Employees' Alliance, International Brotherhood of	1	11
Railroad Telegraphers, Order of	12	6,805
Railroad Trainmen, Brotherhood of	95	14,093
Railway Carmen of America, Brotherhood of	110	11,010
Railway and Steamship Clerks, Freight Handlers, Express and Station Employees, Brotherhood of	53	3,000
Railway Conductors, Order of	71	4,402
Railway Employees of North America, United Association of	1	200
Railway Employees of America, Amalgamated Association of Street and Electric	28	7,500
Retail Clerks' International Protective Association	3	218
Seamen's Union of America, International	6	–
Siderographers, International Association of	1	12
Stage Employees, International Alliance of Theatrical	35	1,105
Stationary Firemen and Oilers, International Brotherhood of	3	160
Steam and Operating Engineers, International Union of	22	780
Steam Shovel and Dredgemen, International Brotherhood of	6	425
Stereotypers and Electrotypers' Union, International	10	269
Stonecutters' Association of North America, Journeymen	22	545
Stove Mounters' International Union	3	75
Switchmen's Union of North America	8	216
Tailors' Union of America, Journeymen	11	464
Teamsters, Chauffeurs, Stablemen and Helpers, International Brotherhood of	9	747
Textile Workers of America, United	2	2,304
Typographical Union, International	50	4,983
Upholsterers' International Union of America	3	135
Wireless and Cable Telegraphers, Association of	1	54
Total	**2,108**	**206,150**

Table 8 gives the number of branches and of members of non-international trade unions operating in Canada at the close of 1922.

8.—Non-international Trade Unions Operating in Canada.

NUMBER OF BRANCHES AND NUMBER OF MEMBERS, DECEMBER, 1922.

Name of Organization.	Branches or affiliations.	Membership reported.
Trades and Labour Congress of Canada	41	5,926
Canadian Federation of Labour	19	3,930
Associated Federal Employees of Canada	3	504
Amalgamated Civil Servants of Canada	10	800
Brotherhood of Dominion Express Employees	25	1,840
Canadian Association of Railway Enginemen	17	498
Canadian Association of Railway Shopmen	2	540
Canadian Association of Stationary Engineers	14	400
Canadian Carpet Weavers' Beneficial Association	4	256
Canadian Electrical Trades Union	7	1,200
Canadian Federation of Bricklayers, Masons and Plasterers	6	987
Canadian Great Lakes Fishermen's Protective Association	1	40
Commercial Telegraphers' Union of Canada	5	400
Dominion Postal Clerks' Association	36	1,600
Dominion Postal Porters and Transfer Agents' Association	9	300
Dominion Railway Mail Clerks' Federation	13	954
Federated Association of Letter Carriers	40	1,723
National Association of Marine Engineers	17	900
Saskatchewan Brotherhood of Steam and Operating Engineers	3	75
One Big Union	1	100
Total	**273**	**22,973**

5.—Fatal Industrial Accidents in Canada.

Statistics of fatal industrial accidents have been compiled by the Department of Labour since 1903, the data being obtained from Provincial Workmen's Compensation Boards and other Provincial Departments and from various other governmental authorities. Table 9 shows the number of fatal industrial accidents reported to the Department during 1922 and to the end of September, 1923, together with the percentage that the number of accidents in the different industrial divisions bears to the total.

Of the 1,129 fatal industrial accidents reported in Canada during 1922, the largest number, 322, was reported in the transportation and public utilities group, 143 of these taking place on steam railways. Seventy-one deaths in the railway service were due to men having been struck by, run over or crushed by or between cars or engines, 24 were due to derailments and collisions, and 24 were occasioned by falls from cars and engines. Of the 170 deaths in the mining group, 97 occurred in coal mines. Falls of rock, stone, etc., and cave-ins accounted for 65 deaths in the mining

division; 37 were due to explosions and 19 to mine and quarry cars. In the manufacturing industries there were 165 deaths recorded, 43 of which occurred in saw and planing mills, 39 in the iron and steel industries and 10 in the vegetable, food, drink and tobacco group. In the saw and planing mills, 20 deaths were due to machinery and "prime movers" used in the working of machinery, and 9 were due to "flying objects," including wood rebounding from saws, etc. In the lumbering industry 151 deaths were reported, of which 36 were due to falling trees, branches, etc., and 37 were due to drowning. In the construction group there were 146 deaths, 40 of which were caused by falls and 32 by falling objects. The record of all industries shows 69 deaths due to machinery and "prime movers," 39 due to hoisting apparatus and 118 to dangerous substances, among which are included steam escapes and boiler explosions, 6, explosive substances, 58, and electric currents, 41. There were 124 deaths due to drowning, 26 to infection and 17 to asphyxiation.

The distribution according to province showed Ontario with the highest record, 469, while in British Columbia and Quebec there were 190 and 155 deaths respectively.

An analysis by months shows that the largest number of deaths occurred in December, in which there were 130 fatal industrial accidents, and in August, when 117 fatalities were recorded. January and February, with 54 and 58 deaths respectively, had the smallest totals for 1922.

9.—Fatal Industrial Accidents in Canada, 1922-23.

Industries.	Twelve Months, 1922.		Nine Months, 1923.	
	Number of Accidents.	Percentage of Total.	Number of Accidents.	Percentage of Total.
Agriculture	65	5·8	86	8·5
Logging	151	13·4	130	12·8
Fishing and Trapping	20	1·8	18	1·8
Mining, Non-Ferrous Smelting and Quarrying	170	15·1	143	14·1
Manufacturing	165	14·6	127	12·6
Construction	146	12·9	120	11·9
Transportation and Public Utilities	322	28·5	278	27·6
Trade	17	1·5	20	2·0
Service	41	3·6	49	4·8
Miscellaneous	32	2·8	39	3·9
All Industries	**1,129**	**100·0**	**1,010**	**100·0**

6.—Employers' Liability and Workmen's Compensation in Canada.

Throughout the greater part of the 19th century it was generally held, in Canada as in England, that workers in hazardous trades received higher wages than the average, out of which they could insure themselves against the ordinary risks incidental to their occupation. They were, therefore, considered to have assumed

these ordinary risks, while it was also held that the injured workman or the dependants of the dead could not recover damages if the worker had been injured or killed through the negligence of a fellow-servant or if his own negligence had been a contributory cause. Under the British Employers' Liability Act of 1880 and the Ontario Act of 1886, fellow-servants in the position of foremen or superintendents were for the first time regarded as standing to the ordinary worker in the place of the employer, who was held liable for injuries due to their negligence. British Columbia passed an Employers' Liability Act in 1891, which was amended in 1892 and remodelled ten years later. The Manitoba Act of 1893 was amended in 1895 and 1898 and consolidated in 1902, while a new Act was passed in 1910. Similarly, the Nova Scotia Act of 1900 was replaced by a new measure in 1909. New Brunswick passed an Employers' Liability Act in 1903 and amended it in 1907 and 1908. Alberta passed an Act in 1908, Quebec in 1909 and Saskatchewan in 1911. Most of these Acts followed generally along the lines of British legislation, while the 1909 Act of Quebec is an outgrowth of the Civil Code of that province. All these Acts involved resort to the courts.

An epoch-making departure in legislation of this kind was inaugurated by the Ontario Act of 1914, based upon the report of a Royal Commission, and introducing the new principle of making compensation for accidents a charge upon the industry concerned instead of a liability of the individual employer. The working out of this principle involved the creation of a state board administering an accident fund made up exclusively of compulsory contributions from employers grouped in classes and assessed according to the hazard of the industry. The example of Ontario in passing an Act of this kind was followed by Nova Scotia in 1915; British Columbia in 1916, Alberta and New Brunswick in 1918 and Manitoba in 1920. Quebec and Saskatchewan retain systems instituted in 1909 and 1911 respectively, which enable workmen to obtain compensation from their employers individually through private insurance companies or by means of action in the courts. The Quebec Legislature in 1922 authorized the appointment of a special commission to consider and report upon the subject of workmen's compensation.

Workmen's Compensation Acts in Canada cover practically the whole industrial field, including manufacturing, construction, lumbering, mining, quarrying, transportation and public utilities. In Ontario certain industries (including municipal undertakings, railways, car shops, telegraphs, telephones, etc.) are made individually liable to pay compensation, and are, therefore, not called upon to contribute to the general compensation or accident funds. Other occupations, with the exception of those which are specifically excluded, may be brought under the terms of the Act on application from the employer with the Board's approval. In Alberta the consent of the employees is also required. In most provinces the excluded classes include travellers, casual labourers, out-workers, domestic servants and farm labourers. In Nova Scotia, however, an amendment was passed in 1922 providing for the admission of farm labourers and domestics on application of their employers. British Columbia in the same year admitted farm labourers and repealed a former rule excluding office workers.

The Dominion Parliament in 1918 passed an Act (8 Geo. V, c. 15), providing that the compensation to be paid where employees of the Dominion Government were killed or injured in the course of their employment should be the same as they or their dependants would receive in private employment in the province where the accident occurred, the amount to be determined by the Provincial Board or other constituted authority and paid by the Dominion Government.

The principal features of the Workmen's Compensation and Employers' Liability Acts in force in the various provinces at the commencement of 1923 are given in Table 10.

10.—Provisions of Employers' Liability and Workmen's Compensation

Items.	Nova Scotia.	New Brunswick.	Quebec.	Ontario.
1. Death— Funeral	$75	$100	$50 (including medical expense).	$125
Dependants— Widow	$30 per month	$30 per month		$40 per month plus lump sum of $100.
Child	$7.50 per month each up to 16 years.	$7.50 per month each up to 16 years. Where sole dependants are children to each child $15 a month until 16 (if boy) or until 18 (if girl).	Minimum total compensation $1,500.	$10 per month each up to 16 years. Where children only, $15 to each.
Maximum benefits to dependants.	$60 per month	55 p.c. of earnings of deceased.	Total compensation, $3,000.	66⅔ p.c. of monthly wages.
2. Permanent total disability.	55 p.c. of wages	55 p.c. of wages	50 p.c. of wages up to $1,000 per year and 25 p.c. after up to $1,500 per year.	66⅔ p.c. of wages for life.
	Minimum $5 per week.	Minimum $6 per week.	Maximum amount of lump sum, $3,000.	Minimum $12.50 per week.
	Maximum 55 p.c. of $1,200 per year.	Maximum 55 p.c. of $125 per month.		Maximum earnings reckoned $2,000 a year.
3. Permanent partial disability.	55 p.c. of difference of earnings before and after accident.	Amount determined by Board.	50 p.c. of difference in earnings before and after accident.	66⅔ p.c. of difference in earnings before and after accident.
	Minimum $5 per week.	Minimum $1,500 in case of major injuries.		
	Maximum 55 p.c. of $1,200 annual income.	Maximum $2,500.		
4. Temporary total disability.	55 p.c. of wages	55 p.c. of wages	50 p.c. of wages	66⅔ p.c. of wages, payable only so long as disability lasts.
	Minimum $5 per week.	Minimum $6 per week.	Minimum $4 per week.	Minimum $12.50 per week.
	Maximum 55 p.c. of $1,200 annual income.	Maximum 55 p.c. of $125 per month.	Maximum 50 p.c. of $1,500.	
5. Temporary partial disability.	55 p.c. of difference in earning power before and after accident.	55 p.c. of difference in earning power before and after accident.	50 p.c. of wages	66⅔ p.c. of difference in earning power before and after accident.
			Minimum $4 per week. Maximum 50 p.c. of $1,500.	
6. Medical aid	Full expenses for 30 days taken from accident fund.	Full expenses taken from accident fund.	None	Full expenses taken from accident fund.
7. Special medical aid.	Full expenses taken from accident fund.	Full expenses taken from accident fund.	None	Full expenses taken from accident fund.

Laws in the various provinces in 1923.

Manitoba.	Saskatchewan.	Alberta.	British Columbia.
$150.....	Total benefits not to exceed $2,500 per year.	$100.....	$100.
$30 per month.....	.....	$35 per month.	$35 per month.
$7.50 per month each up to 16 years.		$7.50 per month up to 16 years. Where children only $12.50 to each, up to $40; up to $30, if a parent, but altogether not exceeding $65.	$7.50 per month up to 16 years.
.....	.....	$65 per month	$65 per month.
66⅔ p.c. of wages.....	Maximum $2,500 per year.	55 p.c. of wages with minimum of $10 per week.	62½ p.c. of wages.
Minimum $6 per week...	.....	Maximum earnings reckoned $2,000 a year.	Maximum earnings reckoned $2,000 a year.
Maximum earnings reckoned $2,000 a year.			
66⅔ p.c. of difference in earnings before and after accident.	Maximum $2,500 per year.	55 p.c. of difference before and after accident.	62½ p.c. of difference in earnings before and after accident.
.....	.....	Minimum $10 per week.	
66⅔ p.c. of wages.....	Maximum $2,500 per year.	55 p.c. of wages.....	62½ p.c. of wages.
Minimum $15 per week..	.....	Maximum earnings $2,000.	Minimum $5 per week.
66⅔ p.c. of difference in earnings before and after accident. Minimum $6 per week.	Not specified.....	55 p.c. of difference in earning power where present wage is less than 90 p.c. of former wage.	62½ p.c. of difference in earning power before and after accident.
Full expenses taken from accident fund.	Not specified.....	Full expenses taken from accident fund.	Full expenses taken from medical aid and accident fund.
Full expenses taken from accident fund.	Not specified.....	Full expenses taken from accident fund.	Full expenses taken from medical aid and accident fund.

10.—Provisions of Employers' Liability and Workmen's Compensation

Items.	Nova Scotia.	New Brunswick.	Quebec.	Ontario.
8. Contribution to accident fund.	Employer.....	Employer.....	None.....	Employer.....
9. Contribution to medical aid fund.	Employer.....	Employer.....	None.....	Employer.....
10. Administration...	Board of three.....	Board of three.....	Circuit and Supreme Court.	Board of three.....
11. Waiting period...	7 days—if longer pay from date of disability.	7 days—if longer pay from date of disability.	7 days.....	7 days—if longer pay from date of disability.
12. Insurance.....	Compulsory state...	Compulsory state...	Employer individually responsible.	Compulsory state...
13. Election by employer.	Any industry not within scope of Act, unless specifically excluded.	Any industry not within scope of Act, unless specifically excluded.	None.....	Election only where 6 or less are employed by either employer or employee, unless specifically excluded.
14. Actions under common law.	Not allowed.....	Not allowed.....	Allowed in industries not coming under Act.	Not allowed.....
15. Injuries covered..	Which arise out of and in course of employment.	Which arise out of and in course of employment.	Which arise out of and in course of employment.	Which arise out of and in course of employment, and in fortuitous events.
16. Accident prevention.	None.....	None.....	None.....	Regulations made by groups of employers, work approved by Board.
17. Time limit for claim.	12 months. (This period extended if disability becomes evident later.)	12 months.....	12 months.....	At once, 6 months or more at discretion of board.
18. Method of paying.	By board.....	By board.....	By employer monthly or on regular pay day.	By Board or order of Board.
19. Exemptions.....	Travellers, Casual Labourers, Out-workers, Police and Firemen, Employer's Family; Farm labourers and domestic servants may be admitted on application of employers.	Travellers, Casual Labourers, Out-workers, Domestic Servants, Farm Labourers, Clerks, Fishermen, Employer's Family; Police and Firemen.	Farm Labourers, Employees on sailing vessels, All employees earning more than $1,500 per year.	Out-workers, Domestic Servants, Farm Labourers, Executive Officers.
20. Reports.....	Employer, Doctor, Employee.	Employer, Doctor, Employee.	Employer to Factory Inspector.	Employer, Doctor, Employee.

Laws in the various provinces in 1923—concluded.

Manitoba.	Saskatchewan.	Alberta.	British Columbia.
Employer	None	Employer	Employer.
Employer — from accident fund.	None	Employee	Employee and employer.
Board of three	District Court	Board of three	Board of three.
3 days	7 days	3 days; if longer than 10 days, pay from date of accident.	3 days.
Compulsory state	Employer individually responsible.	Compulsory state	Compulsory state.
Any industry not within scope of Act.	None	Any industry not within scope of Act. With approval of 50 p.c of employees, unless specifically excluded.	Any industry not within scope of Act, unless specifically excluded.
Not allowed	Allowed	Not allowed	Not allowed.
Which arise out of and in course of employment.	Which arise out of and in course of employment.	Which arise out of and ir course of employment.	Which arise out of and in course of employment, and in fortuitous events.
None	None	By Board	By Board.
As soon as practical	6 months	At once, 3 months or more, at discretion of board.	12 months.
By Board	By employer, by order of Court.	By Board	By Board.
Casual Labourers, Out-workers, Farmers, Domestic Servants, Executive Officers.	Farm Labourers, Employees other than those engaged in manual labour, earning over $1,800.	Casual Labourers, Out-workers, Farm Labourers, Domestic Servants, Workers in an industry outside the scope of the Act may be brought in on applying; this does not apply to casual workers on farms, or in running trades nor railways.	Travellers, Casual Labourers, Domestic Servants, Employer's family. Office workers may be included.
Employer, Doctor,	Employer to Government.	Employer, Doctor,	Employer. Doctor, Employee.

7.—Trade Disputes—Strikes and Lockouts.

Statistics of strikes and lockouts in Canada have been collected and published by the Department of Labour since its inception in 1900. Table **11** shows the number of disputes, the number of employers and employees involved and the time lost in working days for each year from 1901 to 1922, and the totals for the period. The items in the column headed "time loss in working days" in the tables following, are calculated by multiplying the number of persons directly affected through strikes or lockouts by the number of working days they are so affected during the time the disputes are in existence.

Statistics for the first ten months of 1923 show that there were 72 disputes affecting 357 employers and 30,484 employees. The time lost during the ten months was 656,188 working days. This was about 35 p.c. of the time loss from January 1 to October 31, 1922, when 1,871,267 working days had been lost in industrial disputes. The greatest time loss in any one of the ten months for which figures are available occurred in July, when 310,608 working days were lost. This was chiefly due to related strikes of coal miners and iron and steel workers, which together caused a loss of 282,844 working days.

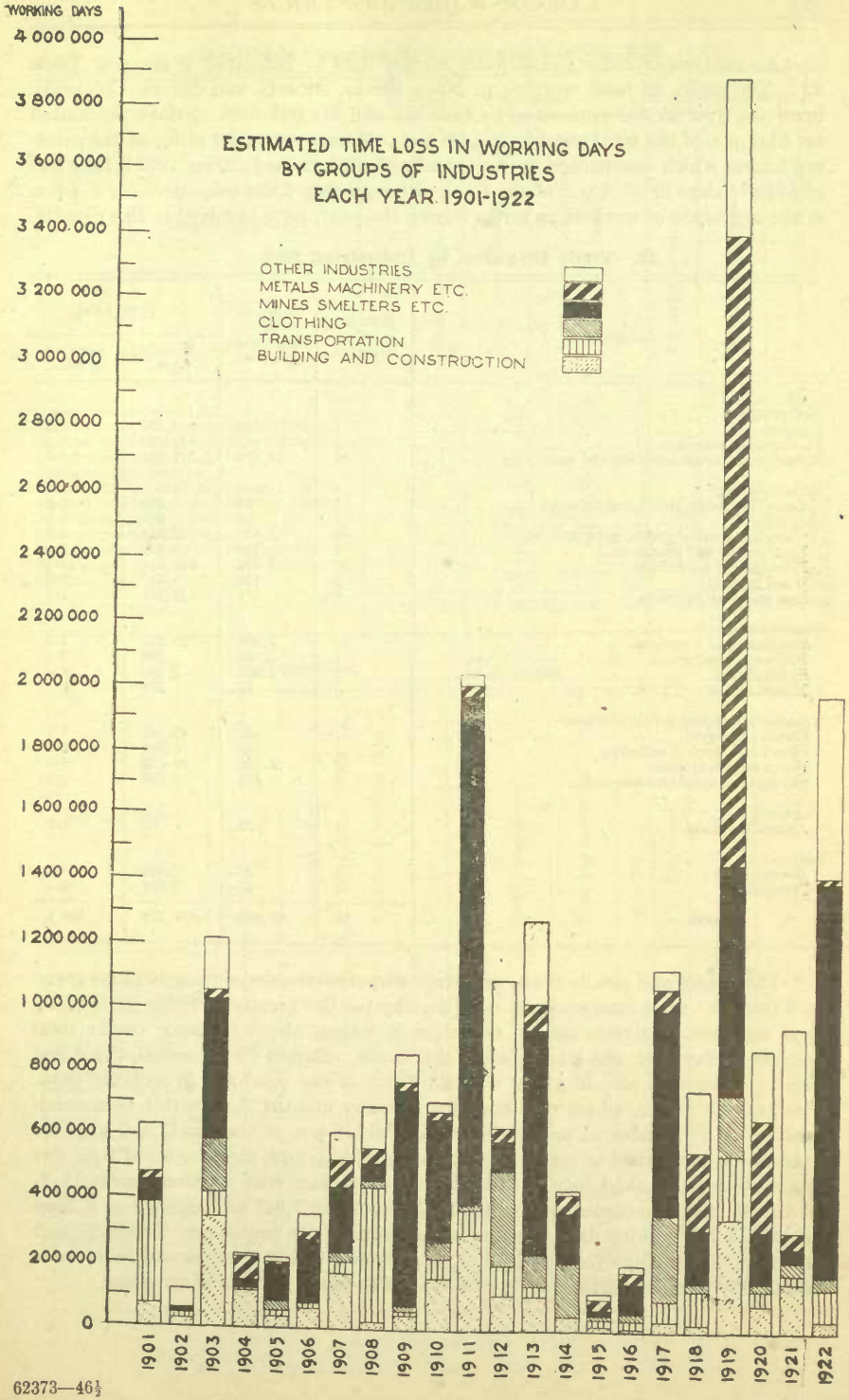
For the year 1922, the number of disputes, the number of employers and employees involved were greater than in the previous year, and the time loss in working days during the year greatly exceeded that for 1921, owing to two strikes of coal miners, one lasting from May to August in south-eastern British Columbia and Alberta, and the three weeks' strike in Nova Scotia during August, as well as to a number of prolonged disputes, such as the printers' strike for a 44-hour week beginning about June 1st, 1921, and to a considerable extent unsettled at the end of the year.

Table **11** is a record of industrial disputes by years from 1901 to 1922. It is interesting to note that 1922 ranks second in the number of working days lost during the 22 years of the record, 1919 taking first place. Of the total time lost since 1900, 9·6 p.c. was due to industrial disputes in 1922 and 19·2 p.c. in 1919. There was an increase in the number of employees involved and in the time lost during 1922 as compared with 1921, although the number of disputes and the number of employers concerned were both smaller than in the latter year.

11.—Record of Trade Disputes by years, 1901-1922.

Years.	Number of Disputes.		Disputes in Existence in the Year.		
	In existence in the year.	Beginning in the year.	Employers involved.	Employees involved.	Time loss in working days.
1901	104	104	273	28,086	632,311
1902	121	121	420	12,264	120,940
1903	146	146	927	50,041	1,226,500
1904	99	99	575	16,482	265,004
1905	89	88	437	16,223	217,244
1906	141	141	1,015	26,050	359,797
1907	149	144	825	36,224	621,962
1908	68	65	175	25,293	708,285
1909	69	69	397	17,332	871,845
1910	84	82	1,335	21,280	718,635
1911	99	96	475	30,094	2,046,650
1912	150	148	989	40,511	1,099,208
1913	113	106	1,015	39,536	1,287,678
1914	44	40	205	8,678	430,054
1915	43	38	96	9,140	106,149
1916	75	74	271	21,157	208,277
1917	148	141	714	48,329	1,134,970
1918	196	191	766	68,489	763,341
1919	298	290	1,913	138,988	3,942,189
1920	285	272	1,273	52,150	886,754
1921	145	138	907	22,930	956,461
1922	85	70	569	41,050	1,975,276
Total	**2,751**[1]	**2,663**	**15,572**	**770,327**[1]	**20,579,530**[1]

[1]In these totals, figures for disputes extending over the end of a year are counted more than once.


WORKING DAYS
4 000 000
3 800 000
3 600 000
3 400 000
3 200 000
3 000 000
2 800 000
2 600 000
2 400 000
2 200 000
2 000 000
1 800 000
1 600 000
1 400 000
1 200 000
1 000 000
800 000
600 000
400 000
200 000
0
ESTIMATED TIME LOSS IN WORKING DAYS
BY GROUPS OF INDUSTRIES
EACH YEAR 1901-1922
OTHER INDUSTRIES
METALS MACHINERY ETC.
MINES SMELTERS ETC.
CLOTHING
TRANSPORTATION
BUILDING AND CONSTRUCTION
1901
1902
1903
1904
1905
1906
1907
1908
1909
1910
1911
1912
1913
1914
1915
1916
1917
1918
1919
1920
1921
1922

62373—46½

An analysis of industrial disputes during 1922 by industries is given in Table 12. The strike of mine workers in Nova Scotia, Alberta and British Columbia, involving over 25,000 workers and a time loss of 1,219,064 working days, accounted for 61·7 p.c. of the total number of days lost. A long continued strike in the printing trades, which commenced in the summer of 1921, caused during 1922 a time loss of 534,874 days or 27·1 p.c. of the total, although only 1,824 employees, or 4·4 p.c. of the aggregate of workers on strike during the year, were involved in this dispute.

12.—Trade Disputes, by Industries, 1922.

Industries.	Number of Disputes.	Number of Employees Involved.	Time Loss.	
			Working days.	Per cent of total.
Agriculture	–	–	–	–
Logging	1	150	1,350	0·1
Fishing and trapping	2	985	16,290	0·8
Mining, non-ferrous smelting and quarrying	14	25,179	1,219,064	61·7
Manufacturing:—				
Vegetable foods, drink and tobacco	1	20	200	0·0
Textiles	1	42	924	0·0
Clothing, knitted goods, garments, etc	10	5,626	38,844	2·0
Leather, fur and products	1	140	1,260	0·1
Printing and publishing	13	1,824	534,874	27·1
Wood products	2	183	3,087	0·2
Iron and steel products	6	271	19,341	1·0
Construction:—				
Buildings and structures	17	1,396	28,247	1·4
Railway construction	1	40	240	0·0
Shipbuilding	2	1,370	8,690	0·4
Miscellaneous	3	99	873	0·0
Transportation and public utilities:—				
Steam railways	1	150	42,150	2·1
Street and electric railways	2	160	5,162	0·3
Water transportation	2	3,119	49,523	2·6
Storage and local transportation	1	155	1,085	0·1
Trade:—				
Animal products	1	25	75	0·0
Service:—				
Recreational	2	23	1,389	0·1
Personal	2	93	2,608	0·1
Total	**85**	**41,050**	**1,975,276**	**100·1**

The causes and results of the industrial disputes recorded during 1922 are given in Table 13. It is interesting to note that by far the greatest number of working days were lost in strikes against reduction in wages; about 53·2 p.c. of the total number of days lost was attributed to this cause. Strikes for increased wages and shorter hours took second place, with 23·5 p.c. of the total loss in working days. The printers' strike, which continued for so many months, falls within this classification. The number of employees affected (41·1 p.c. of the total) was greatest in strikes which aimed to secure increased wages, although the amount of time lost in such disputes ranked only third in the total time loss, with a percentage of 14·7. Of the 85 strikes recorded during 1922, 35, involving 7,947 employees and a time loss of 119,296 working days, terminated in favour of the employers. Those settled in favour of the employees, 15 in number, affected 14,462 workers and involved a time loss of 971,510 working days, or 49 p.c. of the total number of days lost.

13.—Trade Disputes, by Causes and Results, 1922.

Cause or Object.	In Favour of Employees.				In Favour of Employers.			
	Disputes.	Firms involved.	Employees affected.	Time loss in working days.	Disputes.	Firms involved.	Employees affected.	Time loss in working days.
For increased wages	2	6	236	1,488	4	4	1,797	25,015
For increased wages and shorter hours	1	1	150	1,350	–	–	–	–
For increased wages and other changes	–	–	–	–	–	–	–	–
For shorter hours	–	–	–	–	–	–	–	–
Against longer hours	–	–	–	–	3	4	113	8,930
Against discharge of employees	1	1	168	336	1	1	40	240
Against employment of particular persons	–	–	–	–	1	1	50	1,200
Against reduction in wages	9	68	8,238	956,996	20	148	4,373	79,836
For recognition of union	1	45	5,000	10,000	2	2	21	639
Against employment of non-unionists	–	–	–	–	1	1	200	600
Sympathetic	–	–	–	–	1	5	648	1,296
Unclassified	1	1	670	1,340	2	2	705	1,540
Total	**15**	**122**	**14,462**	**971,510**	**35**	**168**	**7,947**	**119,296**

Cause or Object.	Compromise.				Indefinite or unterminated.				Total.			
	Disputes.	Firms involved.	Employees affected.	Time loss in working days.	Disputes.	Firms involved.	Employees affected.	Time loss in working days.	Disputes.	Firms involved.	Employees affected.	Time loss in working days.
For increased wages	2	12	14,853	263,354	–	–	–	–	8	22	16,886	289,857
For increased wages and shorter hours	2	5	250	43,750	4	108	1,401	419,190	7	114	1,801	464,290
For increased wages and other changes	2	8	48	384	–	–	–	–	2	8	48	384
For shorter hours	–	–	–	–	4	42	145	45,534	4	42	145	45,534
Against longer hours	–	–	–	–	1	17	131	59,545	4	21	244	68,475
Against discharge of employees	–	–	–	–	–	–	–	–	2	2	208	576
Against employment of particular persons	–	–	–	–	–	–	–	–	1	1	50	1,200
Against reduction in wages	12	67	614	13,909	–	–	–	–	41	283	13,225	1,050,741
For recognition of union	–	–	–	–	4	16	820	25,013	7	63	5,841	35,652
Against employment of non-unionists	1	1	15	1,245	–	–	–	–	2	2	215	1,845
Sympathetic	1	1	16	4,496	1	1	25	7,081	3	7	689	12,873
Unclassified	–	–	–	–	1	1	323	969	4	4	1,698	3,849
Total	**20**	**94**	**15,796**	**327,138**	**15**	**185**	**2,845**	**557,332**	**85**	**569**	**41,050**	**1,975,276**

The greatest number of persons affected and of working time lost in any one month of 1922 occurred in August, when 25,364 persons or 61·8 p.c. of the total number of workers on strike, and a time loss of 450,692 working days or 22·8 p.c. of the total, were involved. It was in this month that a strike of coal miners in Nova Scotia affected a large number of employees and caused a severe time loss. A dispute was also in existence in August in the coal mines of District No. 18 in Alberta and British Columbia. During 1921 and 1920 the greatest loss in working days and the largest number of persons affected in industrial disputes took place in June. A record of disputes by months is given in Table **14.**

14.—Trade Disputes, by months, 1920, 1921 and 1922.

Months.	Disputes in Existence.			Number of Employees Affected.			Time Loss in Working Days.		
	1920.	1921.	1922.	1920.	1921.	1922.	1920.	1921.	1922.
January	35	23	22	2,800	1,765	3,435	35,535	30,646	68,474
February	25	31	24	2,345	2,906	3,200	30,920	36,361	62,935
March	28	32	20	4,116	3,468	2,569	39,027	55,502	62,737
April	48	29	26	6,899	4,453	13,086	75,445	63,480	272,946
May	79	56	31	13,856	9,323	13,433	159,072	175,889	279,857
June	66	50	25	15,793	10,239	11,093	185,732	188,020	263,402
July	59	41	21	10,016	9,413	15,553	137,841	92,891	255,734
August	30	31	25	4,840	2,442	25,364	74,366	73,273	450,692
September	29	26	23	2,806	3,948	17,736	28,330	59,849	99,732
October	21	17	18	6,168	1,897	3,240	72,893	46,036	54,758
November	21	18	14	2,295	3,354	2,036	27,269	73,149	48,023
December	14	18	15	1,822	3,759	2,950	20,324	61,365	55,986
Year	**285**[1]	**145**[1]	**85**[1]	**52,150**[1]	**22,930**[1]	**41,050**[1]	**886,754**	**956,461**	**1,975,276**

[1]These figures relate only to the actual number of disputes in existence and the employees involved during the year, not being a summation in each case of the monthly figures.

Table **15** is a record of industrial disputes during 1922, by methods of settlement. Thirty-five industrial disputes terminated as a result of negotiations between the parties in dispute; the number of employees involved in these 35 disputes was 23,920 or 53 p.c. of the total. Five disputes were settled through conciliation or mediation, instituted in three cases by the Department of Labour, while one was terminated by arbitration. In 15 disputes the employees returned to work on the employers' terms and in 13 strikes the strikers were replaced by other workers.

15.—Trade Disputes, by Methods of Settlement, 1922.

Industries or Occupations.	Negotiations between the parties.		Conciliation or mediation.		Arbitration.	
	Number.	Employees involved.	Number.	Employees involved.	Number.	Employees involved.
Agriculture	–	–	–	–	–	–
Logging	–	–	–	–	–	–
Fishing and trapping	–	–	–	–	–	–
Mining, non-ferrous smelting and quarrying	8	16,188	1	7,538	–	–
Manufacturing—						
Vegetable foods, tobacco, etc.	1	20	–	–	–	–
Textiles, etc.	–	–	–	–	–	–
Clothing, knitted goods, etc.	5	5,285	–	–	1	200
Leather, fur and products	1	140	–	–	–	–
Printing and publishing	1	100	–	–	–	–
Wood products	1	8	–	–	–	–
Iron and steel products	1	16	–	–	–	–

15.—Trade Disputes, by Methods of Settlement, 1923—concluded.

Industries or Occupations.	Negotiations between the parties.		Conciliation or mediation.		Arbitration.	
	Number.	Employees involved.	Number.	Employees involved.	Number.	Employees involved.
Construction—						
Buildings and structures	10	737	2	147	–	–
Railway construction	–	–	–	–	–	–
Shipbuilding	1	670	–	–	–	–
Miscellaneous construction	1	40	1	36	–	–
Transportation and public utilities—						
Steam railways	1	150	–	–	–	–
Street and electric railways	–	–	–	–	–	–
Water transportation	1	500	1	2,619	–	–
Storage and local transportation	–	–	–	–	–	–
Trade—						
Animal products	–	–	–	–	–	–
Service—						
Recreational	2	23	–	–	–	–
Personal	1	43	–	–	–	–
Total	**35**	**23,920**	**5**	**10,340**	**1**	**200**

Industries or Occupations.	Reference to Board under I.D.I. Act.		Returned to work on employers' terms.		Replacement of strikers.		Otherwise (including indefinite or unterminated).		Total.	
	Number.	Employees involved.	Number.	Employees involved.	Number.	Employees involved.	Number.	Employees involved.	Number.	Employees involved.
Agriculture	–	–	–	–	–	–	–	–	–	–
Logging	–	–	1	150	–	–	–	–	1	150
Fishing and trapping	–	–	2	985	–	–	–	–	2	985
Mining, non-ferrous smelting and quarrying	–	–	–	–	1	150	4	1,303	14	25,179
Manufacturing—										
Vegetable foods, tobacco, etc	–	–	–	–	–	–	–	–	1	20
Textiles, etc	–	–	–	–	1	42	–	–	1	42
Clothing, knitted goods, etc	–	–	2	36	2	105	–	–	10	5,626
Leather, fur and products	–	–	–	–	–	–	–	–	1	140
Printing and publishing	–	–	–	–	1	12	11	1,712	13	1,824
Wood products	–	–	1	175	–	–	–	–	2	183
Iron and steel products	–	–	3	232	2	23	–	–	6	271
Construction—										
Buildings and structures	–	–	2	25	3	487	–	–	17	1,396
Railway construction	–	–	1	40	–	–	–	–	1	40
Shipbuilding	–	–	1	700	–	–	–	–	2	1,370
Miscellaneous construction	–	–	–	–	1	23	–	–	3	99
Transportation and public utilities—										
Steam railways	–	–	–	–	–	–	–	–	1	150
Street and electric railways	–	–	1	130	–	–	1	30	2	160
Water transportation	–	–	–	–	–	–	–	–	2	3,119
Storage and local transportation	–	–	–	–	1	155	–	–	1	155
Trade—										
Animal products	–	–	1	25	–	–	–	–	1	25
Service—										
Recreational	–	–	–	–	–	–	–	–	2	23
Personal	–	–	–	–	1	50	–	–	2	93
Total	**–**	**–**	**15**	**2,498**	**13**	**1,047**	**16**	**3,045**	**85**	**41,050**

8.—Employment and Unemployment.

Employment Service of Canada.—The Employment Offices Co-ordination Act (8-9 Geo. V, c. 2), empowering the Minister of Labour to aid and encourage the organization and co-ordination of public employment offices throughout Canada in order to establish a Dominion-wide Employment Service, was passed in May 1918. At that time there were only twelve provincial employment offices in the Dominion, but at the close of the year fifteen offices were in operation and by the end of 1919 the number had increased to ninety-two. As the demobilization period came to a close, the number of offices decreased and at the end of the year 1922 there were 77 offices, distributed among the provinces as follows:—Nova Scotia, 4; New Brunswick, 3; Quebec, 5; Ontario, 26; Manitoba, 9; Saskatchewan, 10; Alberta, 6; British Columbia, 14.

Under the Employment Offices Co-ordination Act, sums aggregating $50,000 in 1918-19, $100,000 in 1919-1920 and $150,000 in subsequent years, (amounts afterwards increased), were appropriated to be paid to the Provincial Governments in proportion to their expenditure on employment offices, to assist them in organizing and extending their services. Subventions were made conditional upon an agreement between the Minister of Labour and the Provincial Governments as to the terms, conditions and purposes upon and for which payments should be made. During 1922 agreements were completed with all the provinces except New Brunswick and Prince Edward Island. Agreements were also made during the year with the municipalities of Moncton, Chatham and St. John in accordance with an amendment to the Act passed in 1920. The agreement requires that in the operation of the employment offices the provinces shall endeavour to fill situations in all trades and occupations for both men and women and that no charge shall be made to employers or employees for this service. Each province agrees to maintain a provincial clearance system in co-operation with the interprovincial clearance system established by the Dominion Government; to organize in connection with the Employment Service of the province a provincial advisory council, and in every city of the province with a population of 25,000 or more in which an employment office is established, a local advisory council, representing equally employers and employees, to assist in the administration of the employment offices.

Regulations issued under authority of the Act in December, 1918, in addition to authorizing Provincial and Local Advisory Councils, provided for the establishment of the Employment Service Council of Canada, to advise the Minister of Labour in the administration of the Act and to recommend ways of preventing unemployment. This body is composed of representatives of the Dominion and Provincial Governments, the Canadian Manufacturers' Association, the Association of Canadian Building and Construction Industries, the Trades and Labour Congress of Canada, the Railway Association of Canada, the Canadian Railway Brotherhoods, the Canadian Lumbermen's Association, the Canadian Council of Agriculture and returned soldiers. It has held four meetings, the first in May, 1919, the second in September, 1920, the third from Aug. 31 to Sept. 2, 1921, and the fourth in June, 1922, at which plans for developing the work of the Employment Service and for preventing unemployment were discussed and recommendations presenting the views of the Council were adopted.

From January 1 to October 31, 1923, the applications for employment registered at the local offices of the Employment Service of Canada numbered 509,257, of which 410,815 were from men and 98,442 from women. The number of vacancies

listed by employers during the same period numbered 484,271, of which 389,302 were positions for men and 94,969 for women. A total of 308,836 placements in regular employment were made, 277,593 of these being of men and 31,243 of women. In addition, 101,256 placements in casual work were effected; 59,097 of these placements were of men and 42,159 were of women.

During the year 1922, the applications for employment received at the various local offices of the Employment Service of Canada totalled 548,282, of which 443,875 were from men and 104,407 from women. The number of vacancies notified by employers to the Service during the same period was 469,888, of which 365,529 were for men and 104,359 for women. During the year a total of 393,522 placements were made, of which 297,827 were in regular employment and 95,695 in casual work. Of the placements in regular employment, 264,820 were of men and 33,007 were of women.

A special transportation rate for persons sent by the Service to employment at a distance is in effect. This rate, applying only in cases of *bona fide* placements through the Employment Service, was granted during the year 1922 to 36,231 persons, of whom 21,787 were going to points in the same province as the dispatching offices and 14,444 to points in other provinces.

During the fiscal year 1919-20 an arrangement was put into effect with regard to the admission of workers from Great Britain to fill vacancies which cannot be filled in Canada. This plan, which involves close co-operation between the Immigration Department and the Employment Service and between the Employment Service of Canada and the British Employment Exchanges, proved on the whole very satisfactory and continued in force during 1921 and 1922. A procedure has been adopted which as far as possible obviates delay and at the same time insures that workers shall not be brought into the country before every effort has been made to secure the required help in Canada and the authorities have had an opportunity of deciding whether prevailing conditions warrant the importation of the required labour.

Data covering the field of employment are collected and compiled by the Employment Service of Canada and by the Dominion Bureau of Statistics, three principal sources of information being used during 1922. Employment office and trade union statistics are tabulated by the Employment Service, while the Bureau of Statistics collects payroll data from employers of labour. Monthly returns furnished by some 6,000 firms with over 800,000 employees show that marked recovery from the depression of 1921 was indicated during 1922 and 1923. Employment increased almost uninterruptedly from the spring of 1922 until the winter contraction of industry caused the usual slackening of activity in December. The situation continued to show seasonable dullness until April 1, 1923, from which month marked improvement was indicated until the autumn. The manufacturing and construction industries shared more particularly in the expansion, while transportation, logging, mining, trade and other industries also showed considerably greater activity during 1922 and 1923 than in 1921. Index numbers of employment by industries are given in Table **16**. Trade union reports compiled by the Employment Service confirmed the favourable movement indicated in the employers' index numbers. Statements from some 1,500 local organizations, representing over 150,000 members, showed that during 1922 unemployment from January to the end of October declined each month with only one exception. Conditions were slightly less favourable in January, 1923, than in the month before, but from the early spring employment among local trade unionists increased steadily until the autumn.

It is interesting to note the similarity of movement that exists between the index numbers of employment as reported by employers and by trade unionists. The latter index since 1920 has almost invariably been on a higher level than the employers' index; this is explained by the fact that in a period of depression, such as that which began during 1920 and from which recovery is not yet complete, many trade unionists take out withdrawal cards from their locals when they are unemployed for any length of time, in order to seek work in other centres. Such former members are, therefore, not included in the statistics furnished by labour officials. Furthermore, since a large proportion of trade unionists are skilled workers, they are usually last to be affected by unemployment. The reports from employers cover many workers whose employment is necessarily of a seasonal and more or less casual character, as well as many unskilled labourers engaged on construction and other work.

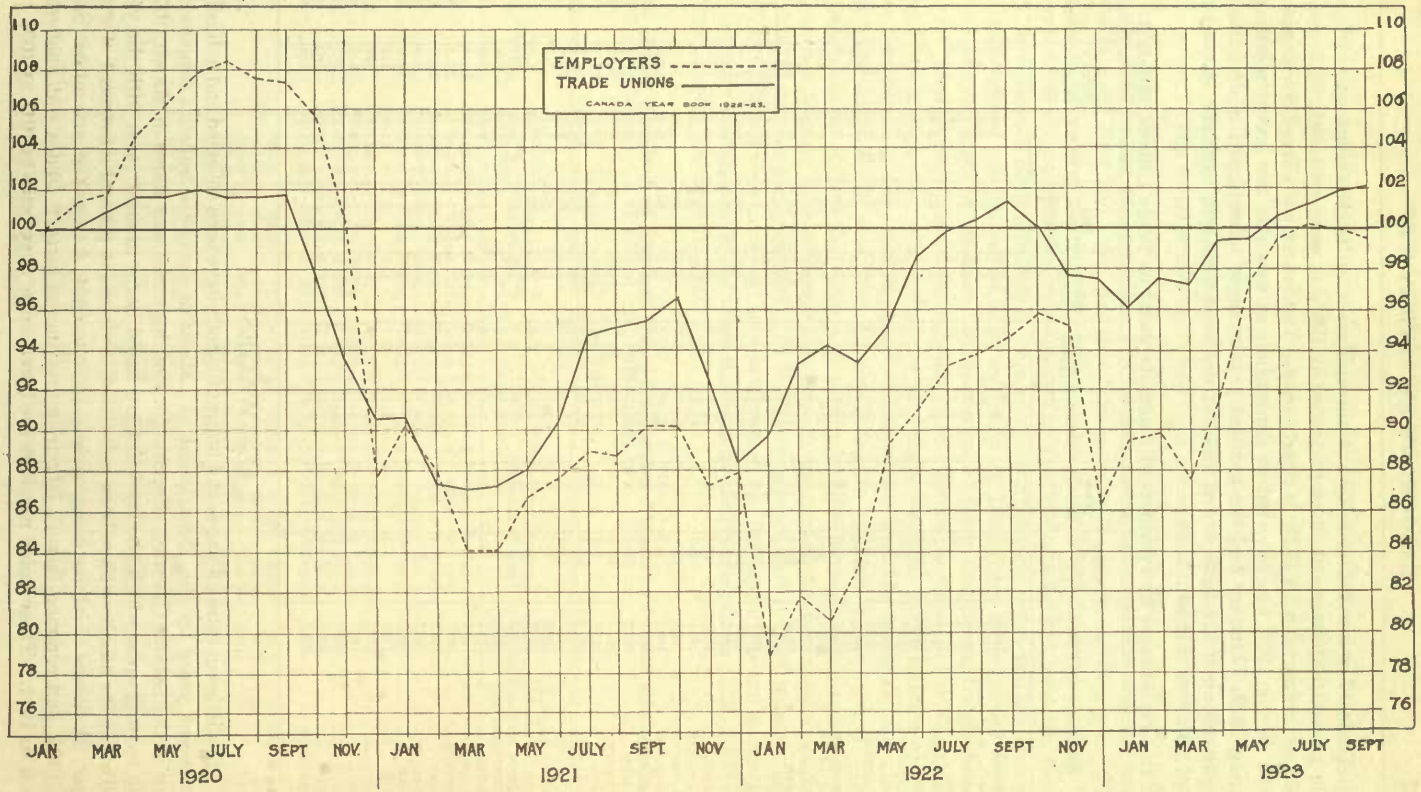
The curves of employment based upon the index numbers of employment reported by employers and trade unionists, as shown in the chart on page 731, followed very much the same general course since 1920; the latter curve, however, does not show as wide a range as the employers', since it failed to attain as high a level in 1920 and did not decline as low during 1921 or 1922.

16.—Index Numbers of Employment as reported by Employers, by Industries, as at the end of each month, January, 1921, to October, 1923.

Years and Months.	Manufacturing.	Logging.	Mining.	Communication.	Transportation.	Construction and Maintenance.	Services.	Trade.	All Industries.
1921.									
Jan.....	84·8	94·3	95·8	104·6	101·3	100·1	94·2	92·5	90·1
Feb.....	84·6	81·8	92·8	104·1	95·8	89·2	96·3	92·0	88·0
Mar.....	80·7	44·5	88·0	101·8	95·5	86·7	97 8	92·5	84·1
Apr.....	80·2	49·9	86·9	103·1	94·0	92·7	98·3	94·2	84·1
May.....	81·1	47·3	88·7	106·1	98·1	111·9	103·8	92·5	86·6
June.....	80·9	35·4	92·2	107·4	99·6	126·7	108·0	92·7	87·5
July.....	81·3	32·3	91·0	107·1	102·7	144·6	107·7	91·4	88·9
Aug.....	79·3	41·9	96·0	106·8	106·6	141·6	107·3	92·1	88·7
Sept.....	81·3	48·1	96·4	105·1	109·6	142·5	104·5	92·4	90·2
Oct.....	81·1	59·7	98·1	104·5	110·5	139·3	96·0	93·0	90·2
Nov.....	79·3	61·2	98·0	103·8	106·9	113·2	93·4	96·3	87·2
Dec.....	68·7	59·5	93·0	101·1	99·2	92·4	92·9	96·9	77·9
1922.									
Jan.....	73·0	61·5	89·7	95·7	97·0	79·8	91·7	90·3	78·9
Feb.....	78·1	54·8	90·3	97·5	97·1	83·7	93·0	88·2	81·9
Mar.....	78·0	27·2	88·9	98·2	96·8	81·4	94·6	88·6	80·6
Apr.....	79·0	37·0	90·2	100·4	98·7	101·1	95·6	90·1	83·3
May.....	84·2	37·5	92·6	100·6	106·2	129·5	100·3	90·0	89·2
June.....	84·2	31·4	94·4	100·6	109·2	157·4	104·4	90·7	91·1
July.....	85·8	27·9	96·2	103·1	111·6	169·4	104·7	90·1	93·1
Aug.....	86·5	36·5	97·1	103·4	111·9	164·3	105·0	90·8	93·7
Sept.....	86·7	42·1	101·1	102·8	114·0	166·2	102·0	91·9	94·6
Oct.....	87·7	66·0	104·5	102·2	114·7	153·2	96·6	93·8	95·8
Nov.....	87·7	84·7	102·8	101·5	115·3	122·6	95·8	97·0	95·1
Dec.....	78·1	87·0	100·8	97·4	104·8	96·0	92·8	98·2	86·3
1923.									
Jan.....	85·0	95·1	101·3	96·5	101·5	86·0	92·4	93·7	89·5
Feb.....	87·5	88·8	98·6	97·4	99·8	83·8	93·4	88·9	89·9
Mar.....	85·6	57·8	97·0	98·0	100·2	85·2	94·9	90·2	87·6
Apr.....	90·5	48·0	96·7	99·7	101·7	101·6	97·1	91·7	91·4
May.....	93·5	52·5	101·6	102·2	109·0	140·2	108·8	91·9	97·3
June.....	93·6	48·4	101·6	103·4	112·2	169·1	115·1	92·3	99·5
July.....	93·5	42·2	101·0	105·2	113·4	183·7	118·7	91·7	100·2
Aug.....	93·0	43·1	104·0	106·4	113·4	180·9	120·3	92·0	100·0
Sept.....	91·8	51·7	104·9	106·6	116·2	171·8	113·7	93·2	99·5
Oct.....	91·2	62·6	105·4	105·3	116·8	159·3	108·5	93·1	98·8

NOTE.—Number of employees of the reporting firms in January, 1920, is taken as 100 in every case.

INDEX NUMBERS OF EMPLOYMENT AS REPORTED BY EMPLOYERS AND TRADE UNIONS 1920-23.



For the curve of employment as reported by employers, the number of employees reported as at work in January 1920, is taken as 100.
For the curve of employment as reported by trade unions, the percentage of trade unionists reported as at work on January 1, 1920, viz., 96·0 p.c., is taken as 100.

Table 17 is a monthly record of unemployment in trade unions by provinces. The general improvement in employment in 1923, as compared with 1922, and in 1922 as compared with 1921, is clearly seen. The lowest percentage of unemployment during 1923 was reported in September, as was also the lowest percentage during 1922. January had the greatest proportion of unemployed trade unionists in any month of the 1923 record to date; the same month in 1922 also showed the most unfavourable situation.

17.—Percentages by Provinces of Unemployment in Trade Unions, 1915-1923.

Months	Years.	Nova Scotia and P.E.I.	New Brunswick.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.	Canada.
December	1915	·2	·7	9·5	8·1	3·2	7·0	4·3	14·8	7·9
June	1916	·5	·9	1·8	1·7	1·2	2·6	3·0	5·8	2·1
December	1916	·3	·2	3·7	1·6	1·0	1·6	1·7	2·4	2·0
June	1917	·3	·2	2·5	·9	·6	·3	·8	1·8	1·2
December	1917	2·6	4·1	3·2	2·5	1·1	2·4	1·6	3·2	2·5
June	1918	1·2	·3	·5	·4	·3	·2	·4	·9	·4
December	1918	2·0	·4	2·2	2·9	1·3	2·2	2·1	4·0	2·5
June	1919	2·7	2·4	4·0	1·8	1·2	2·5	1·7	3·4	2·6
December	1919	1·5	2·0	3·2	1·9	5·0	6·0	2·8	18·6	4·3
June	1920	·6	·4	3·1	1·6	1·4	2·2	1·2	5·8	2·1
December	1920	6·9	11·0	19·6	12·3	7·8	10·1	9·2	11·6	13·1
January	1921	5·9	8·1	13·3	14·2	8·8	10·1	9·7	21·6	13·1
February	1921	14·4	7·3	10·7	14·8	9·9	12·1	10·3	42·1	16·1
March	1921	17·9	11·7	16·9	13·0	10·5	12·1	9·8	34·6	16·5
April	1921	21·6	12·4	20·7	11·9	10·1	12·8	12·7	25·7	16·3
May	1921	12·9	6·2	26·5	9·1	10·4	9·4	12·0	21·7	15·5
June	1921	14·3	11·7	20·7	6·7	8·0	6·8	9·4	24·4	13·2
July	1921	12·2	10·9	8·7	7·8	6·6	4·9	6·3	16·7	9·1
August	1921	7·4	8·3	11·5	8·0	3·5	3·1	4·8	12·7	8·7
September	1921	8·7	7·0	13·8	6·2	3·9	2·5	3·0	12·5	8·5
October	1921	2·8	5·6	10·7	5·7	4·2	3·3	4·0	14·8	7·4
November	1921	6·9	5·7	20·8	6·1	8·5	5·5	5·9	18·0	11·1
December	1921	5·9	6·9	26·8	9·7	15·5	10·4	6·8	24·7	15·1
January	1922	18·4	8·6	14·7	11·1	19·8	13·3	9·5	22·7	13·9
February	1922	11·0	7·4	7·5	10·1	17·0	9·9	8·5	10·1	10·6
March	1922	9·5	7·1	7·7	8·3	14·1	11·0	10·1	17·7	9·6
April	1922	20·0	3·5	10·6	5·9	14·9	8·7	12·3	19·5	10·4
May	1922	12·1	3·1	11·4	3·9	7·1	6·4	5·9	10·9	8·7
June	1922	7·2	3·5	5·4	3·9	6·7	5·0	7·1	7·1	5·3
July	1922	2·0	3·3	5·5	2·8	5·5	3·1	5·0	5·9	4·1
August	1922	2·4	2·8	5·4	2·5	1·6	2·8	3·6	6·1	3·6
September	1922	1·5	2·1	5·1	1·9	·7	·5	1·4	4·8	2·8
October	1922	1·3	2·4	5·9	1·9	5·2	1·4	2·5	10·6	3·9
November	1922	3·0	3·4	11·9	2·2	5·7	2·5	2·9	11·4	6·2
December	1922	3·2	6·1	7·8	4·7	7·8	4·1	5·1	13·3	6·4
January	1923	3·4	5·0	6·0	6·7	12·8	5·7	8·5	16·6	7·8
February	1923	5·7	1·7	6·4	7·0	9·5	5·2	4·8	6·4	6·4
March	1923	3·0	1·4	7·3	5·5	8·5	5·0	7·6	14·0	6·8
April	1923	2·2	·5	4·9	2·8	8·3	3·7	11·9	5·4	4·6
May	1923	1·3	1·0	9·1	1·5	5·4	2·0	7·6	2·4	4·5
June	1923	2·2	1·0	5·7	1·6	5·6	1·3	4·5	4·0	3·4
July	1923	2·5	1·0	4·4	1·7	3·1	1·3	5·8	2·3	2·9
August	1923	·5	·4	2·2	2·2	3·4	1·0	3·6	2·0	2·2
September	1923	1·5	1·7	2·3	2·1	·8	1·1	1·9	2·4	2·0

II.—WAGES.

Statistics of rates of wages and hours of labour have been collected and published for recent years by the Department of Labour in a series of bulletins supplementary to the Labour Gazette. Report No. 1 of this series was issued in March, 1921. The records upon which the statistics are based begin in most cases with the year 1901. Index numbers have been calculated to show the general movement of wage rates, 21 classes of labour being covered back to 1901, 4 classes of coal miners back to 1900, and common factory labour, miscellaneous factory trades and lumbering back to 1911. These index numbers are based upon wage rates in 1913 as 100.

The accompanying table of index numbers (Table 18) shows the relative changes from year to year. A downward movement appeared in most of the groups in 1921 and 1922 since the peak was reached in 1920. The index numbers for 1923 show on the whole a slightly upward trend.

In the building trades there were many instances of decreases of ten cents per hour in 1921 and five cents per hour in 1922, but during 1923 there were some advances. In the metal trades there had been considerable reductions during 1921 and further decreases were made in 1922, while the 1923 wages in these trades showed little change on the whole. For electric railways the index number averaged lower in both 1921 and 1922, but the wage rates were almost stationary in 1923. On steam railways a general cut in wage rates in 1921 was followed in 1922 by decreases for shop employees, maintenance of way workers, freight handlers, clerks and miscellaneous classes, but there were no changes for train crews and few changes for telegraphers. At the end of 1922 and early in 1923 there were partial restorations in some cases in the rates for maintenance of way employees, freight handlers and clerical employees. In coal mining there were decreases in the Vancouver Island mines each year, although there were slight increases in the summer of 1922 over the preceding three-month period, in accordance with the agreement by which quarterly adjustments are made corresponding to changes in the cost of living In southeastern British Columbia and southern Alberta there were no changes in wage rates down to 1923, although the average earnings of contract miners declined in 1922, to recover partly in 1923. In Nova Scotia rates were reduced substantially early in 1922, but were increased later in the year. In factory labour and in lumbering there were considerable decreases in wages in 1921 and again in 1922, while no general change occurred in 1923.

18.—Index Numbers of Rates of Wages for Various Classes of Labour in Canada, 1901-1923.

1913 = 100.

Years.	Building Trades.	Metal Trades.	Printing Trades.	Electric Railways.	Steam Railways.	Coal Mining.	Average.[1]	Common Factory Labour.	Miscellaneous Factory Trades.	Lumbering.
1901	60·3	68·6	60·0	64·0	70·8	82·8	**67·8**	–	–	–
1902	64·2	70·2	61·6	68·0	73·6	83·8	**70·2**	–	–	–
1903	67·4	73·3	62·6	71·1	76·7	85·3	**72·7**	–	–	–
1904	69·7	75·9	66·1	73·1	78·6	85·1	**74·8**	–	–	–
1905	73·0	78·6	68·5	73·5	78·9	86·3	**76·5**	–	–	–
1906	76·9	79·8	72·2	75·7	80·2	87·4	**78·7**	–	–	–
1907	80·2	82·4	78·4	81·4	85·5	93·6	**83·6**	–	–	–
1908	81·5	84·7	80·5	81·8	86·7	94·8	**85·0**	–	–	–
1909	83·1	86·2	83·4	81·1	86·7	95·1	**85·9**	–	–	–
1910	86·9	88·8	87·8	85·7	91·2	94·2	**89·1**	–	–	–
1911	90·2	91·0	91·6	88·1	96·4	97·5	**92·5**	94·9	95·4	93·3
1912	96·0	95·3	96·0	92·3	98·3	98·3	**96·0**	98·1	97·1	98·8
1913	100·0	100·0	100·0	100·0	100·0	100·0	**100·0**	100·0	100·0	100·0
1914	100·8	100·5	102·4	101·0	101·7	101·9	**101·4**	101·0	103·2	94·7
1915	101·5	101·5	103·6	97·8	101·7	102·3	**101·4**	101·0	106·2	89·1
1916	102·4	106·9	105·8	102·2	104·9	111·7	**105·7**	110·4	115·1	109·5
1917	109·9	128·0	111·3	114·6	110·1	130·8	**117·5**	129·2	128·0	130·2
1918	125·9	155·2	123·7	142·9	133·2	157·8	**139·8**	152·3	146·8	150·5
1919	148·2	180·1	145·9	163·3	154·2	170·5	**160·4**	180·2	180·2	169·8
1920	180·9	209·4	184·0	194·2	186·6	197·7	**192·1**	215·3	216·8	202·7
1921	170·5	186·8	193·3	192·1	165·3	208·3	**186·1**	190·6	202·0	152·6
1922	162·5	173·7	192·3	184·4	155·1	197·8	**176·8**	183·0	189·1	158·7
1923	166·4	174·0	188·9	186.2	157·4	197·8	**178·4**	181·7	196·1	170·4

[1]Simple average of 6 preceding columns.

19.—Rates of Wages and Hours of Labour of Employees of Steam Railways in Canada, 1921, 1922 and 1923.

Occupations.	Unit.	September, 1921.		September, 1922.		September, 1923.	
		Wages.	Hours per week.	Wages.	Hours per week.	Wages.	Hours per week.
		$		$		$	
Conductors, passenger	100 miles	4·27	[2]	4·27	2	4·27	[2]
Conductors, freight (Irreg.)	100 miles	5·80	[3]	5·80	3	5·80	[3]
Brakemen, passenger	100 miles	2·93	[2]	2·93	2	2·93	[2]
Brakemen, freight (Irreg.)	100 miles	4·48	[3]	4·48	3	4·48	[3]
Baggagemen, passenger	100 miles	3·04	[2]	3·04	2	3·04	[2]
Engineers, passenger	100 miles	6·00	[2]	6·00	2	6·00	[2]
Engineers, freight (Irreg.)	100 miles	6·64	[3]	6·64	3	6·64	[3]
Firemen, passenger	100 miles	4·48	[2]	4·48	2	4·48	[2]
Firemen, freight (Irreg.)	100 miles	4·88	[3]	4·88	3	4·88	[3]
Despatchers[1]	Month	230.00-238.00	48	230.00-238.00	48	230.00-238.00	48
Telegraphers[1]	Month	117.76-128.76	48	117.00-128.00	48	117.00-128.00	48
Maintenance of Way—							
Foremen (on line)	Day	4·50	48	4·26	48	4·40	48
Sectionmen (on line)	Day	3·20	48	2·80	48	3·04	48
Car and Shop Trades—							
Blacksmiths	Hour	·77	44	·70	44	·70	44
Boilermakers	Hour	·77	44	·70	44	·70	44
Machinists	Hour	·77	44	·70	44	·70	44
Moulders	Hour	·77	44	·70	44	·70	44
Carpenters, freight	Hour	·72	44	·63	44	·63	44
Painters, freight	Hour	·72	44	·63	44	·63	44
Repairers, freight	Hour	·72	44	·63	44	·63	44
Cleaners	Hour	·42	44	·37	44	·38	44

[1] Rates for running trades and despatchers and telegraphers in British Columbia are slightly higher than above. Where ranges are shown for despatchers and telegraphers, the lower rate is that paid east of Fort William, and the higher rate is that paid west of Fort William to British Columbia. [2] Basis of 20 miles per hour. [3] Basis of 12½ miles per hour.

20.—Wages and Hours of Labour of Employees in and about Coal Mines in Canada, 1921, 1922 and 1923.

Occupations.	Unit.	September, 1921.		April, 1922.		September, 1922.		September, 1923.	
		Wages.	Hours [4] per day.	Wages.	Hours [4] per day.	Wages.	Hours [4] per day.	Wages.	Hours [4] per day.
		$		$		$		$	
Nova Scotia—									
Contract miners[1]	Day	7·22	8	—	8	5·94	8	6·84	8
Hand miners[2]	Day	5·05	8	4·00	8	4·85	8	4·85	8
Hoisting engineers	Day	5·15	8	3·68	8	4·35	8	4·35	8
Drivers	Day	4·15	8	3·05	8	3·60	8	3·60	8
Bratticemen	Day	4·30	8	3·10	8	3·75	8	3·75	8
Pumpmen	Day	4·55	8	3·20	8	4·00	8	4·00	8
Labourers, underground	Day	3·90	8	2·84	8	3·35	8	3·35	8
Labourers, surface	Day	3·80	8½	2·84	8½	3·25	8½	3·25	8½
Machinists	Day	5·15	8½	3·68	8½	4·35	8½	4·35	8½
Carpenters	Day	4·60	8½	3·24	8½	4·00	8½	4·00	8½
Blacksmiths	Day	4·85	8½	3·44	8½	4·10	8½	4·10	8½
Alberta [5]—									
Contract miners	Day	9·57	8	[6]	—	9·17	8	10·00	8
Machine miners[2]	Day	8·02	8	[6]	—	8·02	8	8·02	8
Hand miners[2]	Day	7·50	8	[6]	—	7·50	8	7·50	8
Hoisting engineers	Day	7·39	8	[6]	—	7·39	8	7·39	8
Drivers	Day	7·21	8	[6]	—	7·21	8	7·21	8
Bratticemen	Day	7·50	8	[6]	—	7·50	8	7·50	8
Pumpmen	Day	6·89	8	[6]	—	6·89	8	6·89	8
Labourers, underground	Day	6·89	8	[6]	—	6·89	8	6·89	8
Labourers, surface	Day	6·58	8	[6]	—	6·58	8	6·58	8
Machinists	Day	8·14	8	[6]	—	8·14	8	8·14	8
Carpenters	Day	8·14	8	[6]	—	8·14	8	8·14	8
Blacksmiths	Day	8·14	8	[6]	—	8·14	8	8·14	8

20.—Wages and Hours of Labour of Employees in and about Coal Mines in Canada, 1921, 1922 and 1923—concluded.

Occupations.	Unit.	September, 1921.		April, 1922.		September, 1922.		September, 1922.	
		Wages.	Hours (4) per day.	Wages.	Hours (4) per day.	Wages.	Hours (4) per day.	Wages.	Hours (4) per day.
		$		$		$		$	
VANCOUVER I'D [3]—									
Contract miners..	Day	8·10	8	7·20	8	7·23	8	7·14	8
Machine miners [2]..	Day	5·77	8	5·41	8	5·48	8	5·42	8
Hand miners [2]....	Day	5·42	8	5·06	8	5·13	8	5·07	8
Hoisting engineers	Day	6·29	8	5·93	8	6·00	8	5·94	8
Drivers.....	Day	5·07	8	4·71	8	4·78	8	4·72	8
Bratticemen.....	Day	5·07-5·42	8	4·71-5·06	8	4·78-5·13	8	4·77-5·07	8
Pumpmen.....	Day	5·07	8	4·71	8	4·78	8	4·72	8
Labourers, underground.....	Day	5·07	8	4·71	8	4·78	8	4·72	8
Labourers, surface	Day	4·59	9	4·23	8	4·30	8	4·24	8
Machinists.....	Day	6·66	8	6·30	8	6·37	8	6·31	8
Carpenters.....	Day	5·94	8	5·58	8	5·65	8	5·59	8
Blacksmiths.....	Day	6·41	8	6·05	8	6·12	8	6·06	8

[1] Average earnings per day worked on contract. [2] Minimum rate per day when not working on contract, per ton, yard, etc. [3] No figure for Chinese employees included. [4] Some engineers, pumpmen, firemen, etc., work seven days per week. [5] Including the Crow's Nest Pass field in eastern British Columbia. [6] Strike.

21.—Samples of Wages and Hours of Labour for Various Factory Trades in Canada, 1921, 1922 and 1923.

Industries and Occupations.	Unit.	1921.		1922.		1923.	
		Wages.	Hours per week.	Wages.	Hours per week.	Wages.	Hours per week.
COTTON MANUFACTURING.		$		$		$	
Carders—							
Sample No 1.....	Hour	.42	50	.34-.40	50	.34-.40	50
Sample No 2.....	Week	17.30	36	19.00	50	19.00	50
Sample No 3.....	Week	14.20	50	13.15	50	13.60	50
Sample No 4.....	Week	14.15	50	13.50	50	12.85	50
Sample No 5.....	Week	16.65	55	14.15	55	14.15	55
Sample No 6.....	Week	13.19	50	13.84	50	13.88	50
Mule Spinners—							
Sample No 1.....	Hour	.42	50	.44	50	.43½	50
Sample No 2.....	Week	20.20	45	22.30	55	22.30	55
Sample No. 3.....	Hour	.45	50	.43	50	.41	50
Sample No. 4.....	Week	19.22	50	20.00	50	20.40	50
Sample No. 5.....	Week	14.00	50	14.05	50	15.50	50
Warpers—							
Sample No. 1.....	Hour	.28½	50	.37	50	.39	50
Sample No. 2.....	Week	13.50	50	12.70	50	13.50	50
Sample No. 3.....	Week	9.65	45	12.65	60	12.65	65
Sample No. 4.....	Week	15.60	36	14.15	50	14.15	50
Sample No. 5.....	Week	12.75	50	11.15	50	11.30	50
Weavers—							
Sample No. 1.....	Hour	.33½	45	.30	45	.28	50
Sample No. 2.....	Week	15.88	50	16.00	50	16.45	50
Sample No. 3.....	Week	12.90	45	15.50	55	15.50	55
Sample No. 4.....	Week	12.75	50	14.20	50	15.05	50
Sample No. 5.....	Week	19.21	50	19.10	50	19.81	50
WOOLLEN MANUFACTURING AND KNITTING.							
Carders—							
Sample No. 1.....	Hour	.30	55	.22½	55	.22½	58½
Sample No. 2.....	Hour	.32½-37½	50	.29	50	.29	50
Sample No. 3.....	Week	16.50	55	13.00	55	13.00	55
Sample No. 4.....	Day	3.50	54	3.50	54	2.75	54
Sample No. 5.....	Hour	.33½	50	.25 -.35	50	.25 -.30	50
Spinners—							
Sample No. 1.....	Hour	.30	55	.22½	55	.22½	58½
Sample No. 2.....	Hour	.18	50	.18	50	.18	50
Sample No. 3.....	Hour	.37½	50	.33½	50	.33½	55
Sample No. 4.....	Day	2.25 -2.50	54	2.25 -2.75	54	2.50	54
Sample No. 5.....	Hour	.31	50	.20 - .40	50	.30 - .32½	50

21.—Samples of Wages and Hours of Labour for various Factory Trades in Canada, 1921, 1922 and 1923.—concluded.

Industries and Occupations.	Unit.	1921.		1922.		1923.	
		Wages.	Hours per week.	Wages.	Hours per week.	Wages.	Hours per week.
		$		$		$	
WOOLLEN MANUFACTURING AND KNITTING.—con.							
Weavers—							
Sample No. 1	Week	15.00	55	15.00	55	15.00	58½
Sample No. 2	Week	15.40	50	12.00–19.00	50	12.00–20.00	50
Sample No. 3	Week	13.50	55	13.00	55	13.00	55
Sample No. 4	Week	15.00	55	12.00–14.00	55	10.00–15.00	55
Sample No. 5	Day	1.75	54	1.50	54	1.50	54
BOOTS AND SHOES.							
Cutters—							
Sample No. 1	Hour	.40	54	.40	54	.40	54
Sample No. 2	Week	30.00	48	30.00	45	30.00	48
Sample No. 3	Week	20.00	48	22.00	48	17.00	48
Sample No. 4	Day	4.50	50	4.50	50	4.50	50
Lasters—							
Sample No. 1	Week	26.00	48	23.00	48	18.00	48
Sample No. 2	Day	5.00	50	5.00	50	5.00	50
Sample No. 3	Week	21.50	54	21.50	54	21.00	54
Stitchers—							
Sample No. 1	Week	14.00	48	10.50	48	10.00	48
Sample No. 2	Week	13.25	48	13.65	45	13.95	48
Sample No. 3	Day	3.00	50	3.00	50	3.00	50
Machine Operators—							
Sample No. 1	Week	32.00	48	20.00	48	18.00	48
Sample No. 2	Week	20.50	48	22.20	45	22.70	48
Sample No. 3	Week	15.40	55	12.50	55	10.00	55
Sample No. 4	Day	5.00	50	5.00	50	5.00	50
HARNESS AND SADDLERY.							
Harness Makers—							
Sample No. 1	Hour	.51½	44	.46½	54	.49	54
Sample No. 2	Day	4.50	54	4.05	54	4.05	54
Sample No. 3	Week	22.00	52	20·00–25·00	52	18.00–25.00	52
Sample No. 4	Week	22.50	50	22.50	50	23.00	50
Saddle Makers—							
Sample No. 1	Day	5.00	54	4.50	54	4.50	54
Sample No. 2	Day	3.34	48	2.50	48	2.50	48
Sample No. 3	Week	22.50	50	20.50	50	23.00	50
RUBBER.							
Compounders—							
Sample No. 1	Hour	.30	50	.28½	54	.25–.36	54
Sample No. 2	Week	20.05	45	23.65	50	20.40	50
Sample No. 3	Hour	.45	50	.40	50	.45	50
Tire Builders—							
Sample No. 1	Hour	.46½	49½	.48	49½	.49	49½
Sample No. 2	Hour	.50½	49½	.50¾	49½	.56	49½
Sample No. 3	Hour	.70	44	.65	44	.85	44
Tube Makers—							
Sample No. 1	Hour	.70	44	.65	44	.50	44
Sample No. 2	Hour	.27	49½	.25	49½	.38½	49½
Sample No. 3	Hour	.45	50	.40	50	.40	47
MEAT PACKING.							
Slaughterers—							
Sample No. 1	Hour	.49	45	.41	50	.43	50
Sample No. 2	Hour	.50	55	.45	55	.45	55
Sample No. 3	Hour	.55	55	.55	50	.55	50
Sample No. 4	Hour	.50	50	.50	50	.50	50
Curers—							
Sample No. 1	Hour	.42	48	.42	54	.42	48
Sample No. 2	Hour	.52	55	.45–.48	55	.45–.50	55
Sample No. 3	Week	25.00	60	25.00	60	30.00	60
Lard Makers—							
Sample No. 1	Hour	.45–.50	48	.37½–.40	54	.37½–.40	48
Sample No. 2	Hour	.50	55	.45	55	.45	55
Sample No. 3	Week	17.60	50	20.40	51	16.50	48
Sample No. 4	Hour	.50	55	.50	50	.50	50

22.—Samples of Wages and Hours of Labour for unskilled Factory Labour in Canada, 1921, 1922 and 1923.

Industries and Occupations.	Unit.	1921.		1922.		1923.	
		Wages.	Hours per week.	Wages.	Hours per week.	Wages.	Hours per week.
		$		$		$	
Nova Scotia—							
Halifax, No. 1	Hour	.37½	50	.27½	50	.27½	48
Pictou, No. 1	Week	15.00	59	15.00	59	13.50–15.00	59
Sydney, No. 1	Hour	.29	60	.28	59	.33	60
Halifax, No. 2	Hour	.35	55	.32	50	.30	50
New Brunswick—							
St. John, No. 1	Day	3.10	54	2.25	54	2.50	54
St. John, No. 2	Hour	.25	60	.25	60	.28	60
Quebec—							
Quebec, No. 1	Hour	.30	48	.30	48	.30	54
Montreal, No. 1	Hour	.35	50	.30	45	.32½	45
Montreal, No. 2	Week	15.00	48	16.00	48	14.00	48
Montreal, No. 3	Week	15.00	58	18.00	58	18.60	58
Montreal, No. 4	Hour	.37½	55	.37½	55	.40	55
Montreal, No. 5	Hour	.40	50	.35	50	.35	50
Montreal, No. 6	Hour	.31	55	.25	55	.25	55
Montreal, No. 7	Hour	.40	48	.40	48	.40	48
Ontario—							
Guelph, No. 1	Hour	.38	49½	.35	49½	.33⅓	49½
Ingersoll, No. 1	Week	18.00	60	18.74	60	18.60	60
Hamilton, No. 1	Hour	.40	55	.45	50	.45	50
Toronto, No. 1	Hour	.35	50	.35	50	.30–.35	50
Toronto, No. 2	Hour	.34	55	.25–.32½	55	.25–32½	55
Toronto, No. 3	Hour	.40	50	.37½	50	.37½	50
Manitoba—							
Winnipeg, No. 1	Week	20.20	44	17.30	54	17.30	54
Winnipeg, No. 2	Hour	.50	50	.42½	50	.42½	50
Winnipeg, No. 3	Hour	.40–.45	48	.40–.45	48	.40–.45	48
Saskatchewan—							
Regina, No. 1	Hour	.50	44	.50	44	.50	44
Alberta—							
Calgary, No. 1	Week	24.00	48	24.48	48	21.60	48
Calgary, No. 2	Hour	.45	48	.40	48	.40	48
British Columbia—							
Vancouver, No. 1	Day	4.20	44	3.78	44	3.78	44
Vancouver, No. 2	Hour	.52½	44	.47½	44	.45	44
Vancouver, No. 3	Hour	.35	55	.30–.35	55	.30–.40	55

23.—Wages per Hour and Hours worked per Week in leading Trades in Canadian Cities, 1921, 1922 and 1923.

Trades.	Unit.	Halifax.		Montreal.		Toronto.		Winnipeg.		Vancouver.	
		Wages.	Hours per week.	Wages.	Hours per week.	Wages.	Hours per week.	Wages.	Hours per week.	Wages.	Hours per week.
		$		$		$		$		$	
1. Building Trades—											
Bricklayers and masons	1921	Hour. ·75	44	·90–1·00	44—50	1·00	44	1·15	44	1·06¼	44
	1922	Hour. .70–.75	44	.90	44—50	1.00	44	1.15	44	1.06¼	44
	1923	Hour. .90	44	1.00	44—50	1.00	44	1.10	44	1.06¼	44
Carpenters	1921	Hour. .66	44—54	.60–.70	44—55	.90	44	.90	44	.81¼	44
	1922	Hour. .55–.57	44—54	.50–.65	44—60	.80–.90	44	.85–.90	44	.81¼	44
	1923	Hour. .57	44	.60–.72½	50—60	.85–.90	44	.85	44	.84¼	44—48
Plumbers	1921	Hour. .70	44	.62½–.75	44—60	.90	44—48	1.00	44	.90	44
	1922	Hour. .60	44	.60–.70	44—50	.90	44	.90	44	.90–1.00	44
	1923	Hour. .60	44	.70–.85	44—50	.90	44	.90–1.00	44	1.00	44
Builders' labourers	1921	Hour. .40–.45	54	.30–.40	44—60	.50–.60	44	.50–.55	44—60	.50–.62½	44
	1922	Hour. .40	44—54	.30–.35	50—60	.45–.60	44	.40–.45	44—60	.50–.56¼	44
	1923	Hour. .30–.40	44—60	.30–.50	50—60	.40–.65	44	.35–.50	44—60	.50	44

23.—Wages per Hour and Hours worked per Week in leading Trades in Canadian Cities, 1921, 1922 and 1923—concluded.

Trades.	Unit.	Halifax.		Montreal.		Toronto.		Winnipeg.		Vancouver.	
		Wages.	Hours per week.	Wages.	Hours per week.	Wages.	Hours per week.	Wages.	Hours per week.	Wages.	Hours per week.
		$		$		$		$		$	
2. Metal Trades—											
Blacksmiths...1921	Hour.	62½-.82½	48—54	.55-.70	44—60	.60-.70	44—50	.65-.80	44—50	.80-.92	44—48
1922	Hour.	.50-.75	48—50	.52½-.65	50—60	.60-.65	44—50	.67-.70	44—50	.70-83½	44—48
1923	Hour.	.65	44	.57-.65	44—55	.60-.75	44—50	.72	50	.67½	44
Machinists.....1921	Hour.	62½-.82½	48—50	.55-.70	50—60	.55-.70	44—50	.65-.75	44—50	.75-.91	44—48
1922	Hour.	.50-.75	48—50	.50-.70	50—60	.50-.70	44—50	.55-.70	44—50	67½-.83	44—48
1923	Hour.	.50-.65	44—50	.50-.66	44—50	.52½-.68	48—54	.61-.77	44—50	.59-.72	44
Iron moulders.1921	Hour.	.62-.70	48	.65-.75	50	.65-.75	48—50	.61-.75	44—50	.75-.80	44
1922	Hour.	.62-.70	48	.60-.70	48—50	.50-.70	44—50	.54-.72	44—50	.60-.75	44
1923	Hour.	.62-.70	48	.70-.75	48	.67	50	.67½	50	.67½-.70	44
Sheet Metal workers.....1921	Hour.	.62[3]-.70	48—50	.60-.70	44—55	.75-.90	44—50	.65-.82½	44	.90	44
1922	Hour.	.60	44	.60-.65	44—55	.60-.75	44-49½	.65-.75	44—48	.87½	44
1923	Hour.	.60	44	.60-.65	50—54	.60-.80	44	.75-.85	44—50	.90	44
3. Printing Trades—											
Compositiors (Hand, News) 1921	Week.	32.00	48	36.00	48	38.00	48	48.00	46	40.50	45
1922	Week.	32.00	48	36.00	48	38.00	48	47.50[1]	46	40.50	45
1923	Week.	32.00	48	38.00	48	41.00	46½	42.32	46	40.50	45
Pressmen (Web).....1921	Week.	28.00[2]	48	36.00 to 40.70	48	37.00	48	44.00	48	40.50	48
1922	Week.	28.00[2]	48	36.00 to 40.70	48	37.00	48	44.00	48	40.50	48
1923	Week.	28.00[2]	48	36.00 to 40.70	48	40.00	48	42.00	48	40.50	45—48
Bookbinders..1921	Week.	30.00 to 35.00	48	34.00	48	36.00	48	36.00	48	39.60	44
1922	Week.	30.00 to 37.50	48	34.00	48	36.00	48	36.00	48	39.60	44
1923	Week.	30.00 to 37.50	48	34.00	48	36.00	48	36.00	48	40.50	48
Bindery girls..1921	Week.	10.00	48	14.50 to 15.00	48	16.50 to 19.00	48	15.50	48	14.00 to 18.50	44—48
1922	Week.	10.00	48	14.50 to 15.00	48	16.50 to 19.00	48	12.00 to 15.00	48	14.00 to 18.50	44—48
1923	Week.	10.00	48	14.50 to 15.00	48	16.80	48	12.00 to 16.00	44—48	16.20 to 20.25	48
4. Electric railways— Conductors and Motormen.....1921	Hour.	.52	63	.48	60	.60	48	.60	50	.65	48
1922	Hour.	.47	63	.48	60	.60	48	.56	50	.58½	48
1923	Hour.	.45	63	.48	60	.60	48	.56	50	.62[3]	48

[1]From August 1, 1922, $43.70.
[2]Halifax rates are for cylinder pressmen.
[3]Effective September 1, 1923.

Wages in Canadian Manufacturing Industries in 1920 and 1921.—At the census of manufactures taken for 1915, an attempt was made for the first time to secure detailed statistics of the wages paid in manufacturing establishments throughout Canada. Statistics of wages have been obtained on somewhat similar schedules for the intervening years. For 1920, data were furnished covering 490,290

wage-earners out of a total of 596,052 wage-earners enumerated in the census of manufactures; for 1921 those statistics covered 319,845 wage-earners out of an ascertained total of 440,364. The statistics for 1920 and 1921 are given for comparative purposes in Table **25.**

The changes in wages in recent years may best be measured by taking the median wage, that is, the wage of the middle individual in each group, who has as many persons receiving more wages than he does as receive less. On the assumption that the earnings of the members of the wage group containing these individuals were evenly distributed between the upper and lower limits, the median wages for 1915, 1917, 1918, 1919, 1920 and 1921 are shown in Table **24.** The percentages of increase in these years over 1915 are also shown. The median wages declined during 1921 as compared with the high level of 1920, by 7·2 p.c. for persons under 16, by 12·8 p.c. for males over 16 and by 2·3 p.c. for females over 16. The changes in the cost of living in the six years for which these wage statistics are available, are shown by the index numbers (compiled by the Department of Labour), also given in the table.

24.—Median Wages in Manufacturing Industries, 1915-1921.

Years.	Under 16 years of age.		Over 16 years of age.				Index number of retail prices.
	Males and Females.		Males.		Females.		
	$	Increase over 1915 p.c.	$	Increase over 1915 p.c.	$	Increase over 1915 p.c.	
1915	4·48	–	12·64	–	6·87	–	104
1917	5·86	30·8	17·53	38·7	8·58	24·9	143
1918	6·90	54·0	20·28	60·4	9·75	41·9	162
1919	8·06	79·9	22·78	80·2	11·59	68·7	179
1920	9·06	102·2	25·97	105·5	12·80	86·3	192
1921	8·41	87·7	22·64	79·1	12·50	82·0	156

NOTE.—For explanation of term "median", see preceding paragraph.

25.—Weekly Wages of Employees in Canadian Manufacturing Industries, 1920 and 1921.

(Weekly pay for week ending Dec. 15 in each year.)

1920.

Weekly Wage Groups.	Under 16 years of age.	Over 16 years of age.		Total.
	Males and Females.	Males.	Females.	
Under $5 per week	1,399	2,316	3,115	6,830
$5 but under $10	5,670	13,705	23,327	42,702
$10 but under $15	3,555	28,490	42,627	74,672
$15 but under $20	731	50,364	21,241	72,336
$20 but under $24	225	60,042	6,104	66,371
$24 but under $28	159	68,686	2,867	71,712
$28 but under $30	60	26,042	504	26,606
$30 and over	212	128,006	843	129,061
Total	**12,011**	**377,651**	**100,628**	**490,290**
SUMMARY.				
Under $10 per week	7,069	16,021	26,442	49,532
Per cent	58·85	4·24	26·28	10·10
Over $10 per week	4,942	361,630	74,168	440,758
Per cent	41·15	95·76	73·72	89·90

25.—Weekly Wages of Employees in Canadian Manufacturing Industries, 1920 and 1921—concluded.

1921.

Weekly Wage Groups.	Under 16 years of age.	Over 16 years of age.		Total.
	Males and Females.	Males.	Females.	
Under $5 per week	1,207	2,063	3,051	6,321
$5 but under $10	4,369	10,406	19,985	34,760
$10 but under $15	1,648	27,327	34,234	63,209
$15 but under $20	576	50,383	16,521	67,480
$20 but under $25	280	57,711	4,841	62,832
$25 but under $30	138	35,673	1,137	36,948
$30 but under $35	85	23,582	349	24,016
$35 but under $40	28	12,257	146	12,431
$40 but under $45	30	5,972	48	6,050
$45 but under $50	7	2,856	30	2,893
$50 and over	6	2,871	28	2,905
Total	**8,374**	**231,101**	**80,370**	**319,845**
SUMMARY.				
Under $10 per week	5,576	12,469	23,036	41,081
Per cent	66·59	5·40	28·66	12·84
Over $10 per week	2,798	218,632	57,334	278,764
Per cent	33·41	94·60	71·34	87·16

26.—Wage Earners, classified by Groups of Industries and of Wages, 1920 and 1921.

1920.

Groups of Industries.	Under $5 per Week.	$5 to $10 per Week.	$10 to $15 per Week.	$15 to $20 per Week.	$20 to $30 per Week.	$30 and over per Week.	Total Wage Earners.
Vegetable products	796	7,745	13,153	10,572	19,286	7,876	59,428
Animal products	689	2,990	4,196	4,351	10,921	3,901	27,048
Textiles and textile products	1,598	13,814	23,556	18,164	16,802	9,278	83,212
Wood and paper	1,358	6,780	10,964	12,113	29,948	22,977	84,140
Iron and its products	412	2,738	6,050	11,938	47,942	54,418	123,498
Non-ferrous metals and products	31	847	3,038	2,853	6,885	5,164	18,818
Non-metallic mineral products	872	773	1,260	1,546	6,616	6,281	17,348
Chemical and allied products	56	1,160	1,950	1,794	4,228	2,520	11,708
Miscellaneous products	193	1,347	2,737	2,674	6,901	4,605	18,457
Hand trades, construction and repairs	825	4,508	7,768	6,331	15,160	12,041	46,633
Total 1920	**6,830**	**42,702**	**74,672**	**72,336**	**164,689**	**129,061**	**490,290**
Total 1919	**7,977**	**59,053**	**89,296**	**100,541**	**268,638**[1]	–	**525,505**

[1]Over $20 per week.

1921.

Groups of Industries.	Under $5 per Week.	$5 to $10 per Week.	$10 to $15 per Week.	$15 to $20 per Week.	$20 to $30 per Week.	$30 to $40 per Week.	$40 and over per Week.	Total Wage Earners.
Vegetable products	1,287	7,060	11,822	11,324	17,247	3,937	693	53,370
Animal products	902	3,317	5,127	6,637	9,856	2,657	914	29,410
Textiles and textile products	1,923	12,587	22,388	14,482	11,404	3,832	1,820	68,436
Wood and paper	1,327	5,801	10,902	14,482	21,872	8,736	4,537	67,657
Iron and its products	350	2,523	5,849	11,941	21,393	9,897	1,788	53,741
Non-ferrous metals and products	76	919	2,081	2,869	4,435	2,272	1,000	13,652
Non-metallic mineral products	249	381	977	1,611	6,062	2,685	692	12,657
Chemical and allied products	26	990	1,681	1,929	2,756	803	171	8,356
Miscellaneous products	99	952	1,800	1,383	3,223	992	150	8,599
Hand trades, construction and repairs	82	230	582	822	1,532	636	83	3,967
Total	**6,321**	**34,760**	**63,209**	**67,480**	**99,780**	**36,447**	**11,848**	**319,845**

Minimum Wages of Female Employees.

Minimum Wage Acts are on the statute-books of Manitoba, British Columbia, Quebec, Saskatchewan, Nova Scotia, Ontario and Alberta, but the Quebec Act, passed in 1919, and the Nova Scotia Act, passed in 1920, have not yet taken effect. Table 27 shows the comparative weekly rates for experienced adults fixed by the Boards of Alberta, British Columbia, Manitoba, Ontario and Saskatchewan. In Manitoba orders were issued separately for each type of factory; these are grouped in the table under the heading "Manufacturing."

Minimum wage orders in all provinces fix special rates for learners, apprentices or minors, that is, workers under 18 years of age, and some make provision for the physically defective. The learning period ranges from three to eighteen months, according to the nature of the occupation affected by the order, and the rates of wages advance by stages of proficiency until the full minimum wage for experienced adults is reached.

The Boards have power to limit the number of learners and minors employed at a plant. The proportion of these classes to experienced workers varies widely. In British Columbia the proportion for factory workers is 14·3 p.c. and in Manitoba 25 p.c. In Ontario the proportion allowed is 50 p.c. of adult learners and minors combined; neither of these classes, however, can exceed 33 p.c. of the experienced adults employed. The orders so far issued by the Alberta Board have laid down no limits in this respect.

The Boards of all provinces, except Quebec, have power to fix not only the minimum wages, but also the minimum number of hours for which such wages shall be paid. There is, however, a wide divergence in the standards of working hours which have been fixed by the various orders. Many of these orders provide for a working week of 48 hours, but allow latitude in regard to the distribution of these hours throughout the week, to permit of a Saturday half holiday, with consequent lengthening of working hours beyond 8 hours on the other days of the week.

The Alberta Board has issued orders stating that the working week is 48 hours, except in the case of stores.

In British Columbia a week of 48 hours is prescribed for workers in offices, in public housekeeping, in personal service, in theatres, and in telephone and telegraph services; special rules to govern overtime work are laid down in that province for the fruit and vegetable industry. Working hours for women and girls in factories are subject to the provisions of the Provincial Factories Act, while no provision is made in regard to the hours of mercantile, laundry or fishery workers.

In Manitoba the regulations of the Board governing most types of factories provide for a nine hour day and a 48 hour week, but longer hours are permitted in some employments. Thus, bag makers and jewelry workers have a 9 hour day and a 49 hour week; auto top, bedding, glove, dyeing and cleaning workers have a 9 hour day and a 50 hour week, and millinery, knitting, tailoring and dressmaking employees have an 8½ hour day and a 50 hour week. Laundry workers may be employed for 52 hours in the week, but not for more than 9 hours in any day. The Saturday working hours in shops and stores are 11½, with a weekly maximum of 49 hours, or 53 per week in 5 c., 10 c., and 15 c. stores. Office workers in the same province have a maximum week of 44 hours with a maximum day of 8 hours.

The Ontario Board has as yet fixed no definite limits for the working day or week, but the recent orders governing office workers provide that the minimum rates for part time workers shall be based on a regular working week of 48 hours.

In Saskatchewan no time limit is fixed for milliners and dressmakers, but a 48-hour week is fixed as the maximum normal period of employment in laundries and factories, shops, stores and mail order houses, and hotels and restaurants.

Trades Conferences.—The Boards of Alberta, British Columbia, and Ontario, before fixing minimum wage rates for any occupation, summon conferences consisting of representatives of the workers, their employers, and of the general public, and the order which follows generally represents a compromise between the views of the interested parties, though the Board is not bound by the recommendations of such conferences. The Manitoba Board has judicial powers in regard to the taking of evidence before deciding on minimum wage rates.

Minimum Wage Boards.—The Minimum Wage Board of Alberta, established in 1922, consists of three members appointed by the Lieutenant-Governor in Council, and representing respectively the employers, the employed, and the Province at large, one of the members being named chairman of the Board. In British Columbia also, the Board consists of three members; one of these, the Provincial Deputy Minister of Labour, acts as chairman. Similar rules are laid down for the appointment of the Minimum Wage Commission in Quebec, with the further provision that one of the three members be a woman. The Acts of Nova Scotia, Ontario, Manitoba and Saskatchewan place administration in the hands of Boards of five members, including two women, all the members being appointed by the Provincial Government. Board members are allowed no remuneration in British Columbia or Quebec; in Ontario they receive a *per diem* allowance for transaction of official business, while the Acts of Nova Scotia, Manitoba and Saskatchewan allow the members regular remuneration for their services and expenses.

27.—Minimum Weekly Wages for Experienced Female Adults.

Occupations.	Alberta.	British Columbia.	Manitoba.	Ontario.	Saskatchewan.
Manufacturing.....	$12.50	$14.00	$11.00 to $12.00	According to population $12.50 11.50 11.00 10.00	$15.00 (Millinery and dressmaking)
Shops and stores...	$12.50	$12.75 (26$^{9}/_{10}$ cents per hour)	$12.00	According to population $12.50 12.00 11.00 10.00 9.00 8.00	$15.00
Laundries, dyeing and cleaning, etc.	$12.50	$13.50 (28½ cents per hour)	$11.00 to $12.00	According to population $12.00 11.00	$14.00
Offices.....	$14.00	$15.00 ($65 per month)	$12.50	According to population $12.50 12.00 11.00 10.00 9.00 8.00	–

27.—Minimum Weekly Wages for Experienced Female Adults—concluded.

Occupations.	Alberta.	British Columbia.	Manitoba.	Ontario.	Saskatchewan.
Hotels, restaurants, boarding houses, etc.	$14.00 for 6-day week $16.50 for 7-day week	$14.00 (Includes waitresses, chambermaids, elevator operators etc.)	$12.50	-	$14.00 for 6-day week of 48 hours. Kitchen employees $12. $15.00 for 7-day week. Kitchen employees $13.
Personal service...	$14.00 (includes ushers, barbers, cloakroom attendants, etc.)	$14.25	$12.00	-	-
Telephone and telegraph employees.	-	$15.00	-	According to population $12.50 12.00 11.00 10.00 9.00 8.00 7.00	-
Fishing.....	-	$15.50	-	-	-
Fruit and vegetable industry.	-	$14.00 for week of 48 hours piece work rates on this basis.	-	-	-

III.—PRICES.

Price statistics naturally fall into two main divisions—statistics of wholesale and statistics of retail prices. Representative wholesale prices are much more easily collected than are retail prices, since the number of wholesale traders is comparatively small, the grades of commodities more carefully defined, and the price range at a given moment much narrower. Wholesale transactions are generally transactions between expert sellers and expert buyers, dealing with each other on purely business principles. Accordingly, wholesale prices approximately conform to the operation of the law of supply and demand, and are thus more valuable as an index to the current state of business.

Retail prices, on the other hand, are largely governed by custom, and do not respond to every upward or downward fluctuation in wholesale prices. Further, small fluctuations in wholesale prices cannot be fairly represented in retail prices, because of the limitations of the currency in dealing with very small quantities of commodities. Again, retail prices vary considerably for the same commodity in different parts of the same city, this difference being to some extent due to the difference in the service rendered to the purchaser in a "groceteria," "a cash and carry" store or one where credit is given and goods delivered. In the collection of retail price statistics, which in spite of the inherent difficulties must be collected to determine the cost of living, it is necessary to take quotations from the most representative class of retailers, serving the masses of the people.

Further, since "wholesale prices" are determined by the business situation of the moment, while retail prices are largely determined by custom and change comparatively slowly, there exists what is technically called a "lag" between the two, retail prices not showing changes in fundamental business conditions until some time after wholesale prices. Thus, while wholesale prices in Canada reached the peak in May, 1920, and commenced to decline in June, retail prices reached the peak in July, 1920, and began to decline in August.

1.—Wholesale Prices.

The Dominion Bureau of Statistics now issues monthly a new official index number which is computed from 238 commodities, based on the year 1913, as 100, and weighted according to the aggregative method known as Laspeyre's. This index, while constructed with a view to giving continuity with that issued since 1910 by the Department of Labour, has been improved by the adoption of several ideas developed in the science of index number making since the old index was first computed, and by the substitution of new commodities or price series for those which have ceased to be representative owing to changes due to the passage of time. The changes in question may be noted under the following headings: (1) Commodities included; (2) Method of grouping commodities; (3) Base period; and (4) Weighting.

Commodities Included in the Index Number.—The original index number of the Department of Labour was constructed from 230 price series. Although a number of changes were introduced from time to time, some commodities having been dropped and others added (the net result of which was to increase the series to 272), the index has been substantially the same as when first published. It has for some time been recognized that a revision of the list was required. Several of the items have ceased to represent adequately the field from which they were drawn, and the sources from which others were obtained are no longer reliable. The new list contains 238 price series, as many as possible being obtained directly from reputable business concerns as the most dependable sources of information. This has involved the addition of 51 new price series and the dropping of 85 others, whilst substitutions of various kinds have been made in 130 cases.

The number and kind of commodities to be included was determined on the basis of the relative importance of the various groups in exchange, that is, in the general trade of the country. The group of Grains, Fruits and other Vegetable Products was found to have a relative importance in trade of 28·1 p.c.; Animals and their Products, of 21·1 p.c.; Textiles, of 11·8 p.c.; Wood and its Products, of 8·8 p.c.; Iron and Steel, etc., of 10·9 p.c.; Non-Ferrous Metals, of 6·3 p.c.; Non-Metallic Minerals, of 7·1 p.c.; and Chemicals, of 5·9 p.c. On this basis the number of price series allotted to each group was as under:—

1. Vegetable Products (grains, fruits, etc., except woods, fibres and chemicals)	67
2. Animals and Animal Products (except chemicals and fibres)	50
3. Fibres, Textiles and Textile Products	28
4. Wood, Wood Products and Paper	21
5. Iron and its Products	26
6. Non-Ferrous Metals and their Products	15
7. Non-Metallic Minerals and their Products (except chemicals)	17
8. Chemicals and Allied Products	14
	238

Many satisfactory index numbers are, of course, constructed from a much smaller list of price series. The Bureau decided on the larger number in order to establish continuity with the old index number, and also because it is believed that the larger list, drawn from all classes of commodities and containing several representative items from each class, will increase the general usefulness of the report for purposes of reference and will better reveal the changes in the general level of prices.

Methods of Grouping Commodities.—The method of grouping the items for presentation and for calculating group indexes is new, being in conformity with the general plan adopted throughout the Bureau in presenting statistics relating to commodities, so that co-ordination may be possible between the statistics of prices and those of imports and exports, production, transportation, etc. Briefly, the items are grouped on three distinct principles which are each applied separately. In the detailed tables of prices and in one of the series of group indexes the principle of grouping according to "chief component material" (vegetable, animal, wood, iron, etc.) is adopted. At the same time independent classifications are constructed according to "use or purpose" (food, clothing, producers' goods, etc.), and according to "origin" (farm, forest, mineral, marine, etc.). By the use of this method each group has a degree of comprehensiveness and accuracy that is difficult to secure in a classification scheme which adopts more than one of these principles within the same category.

In the case of the purpose classification a few very important commodities have been included twice, so as to appear in both consumers' and producers' goods. In the origin classification, in the sub-division into raw materials and finished products, it is of course the case that certain commodities cannot be classified definitely as raw or finished products, what is raw material from one point of view being finished product from another; *e.g.*, copper ingots may be finished products from the point of view of the smelter, but are the raw materials for several other industries, such as that for producing copper wire. The Bureau, however, has divided all its commodities into two groups (1) raw or partly manufactured products; (2) fully or chiefly manufactured products. It was found impossible to define these two groups so precisely as to make them mutually exclusive, but the commodities were classified with the best judgment that could be brought to bear upon the matter. The results are thought to be better than if a few commodities had been selected as representative.

Base Period.—The original index number of the Department of Labour was based on the period 1890-1899. In view of the upheaval in prices occasioned by the war, comparisons are now called for with the period immediately preceding it. In any event, comparisons with a period so remote as 1890-1899 are not practical, and it is a fact that the more remote the base the wider is the margin of error in the index. In the revision carried out by the Bureau, the year 1913 was adopted as the base period, in conformity with the practice in most other countries. Prices in the year 1913 will in the present and in future reports be represented by the figure 100, and prices in prior and subsequent years will be expressed as percentages of those prevailing in 1913.

Weighting.—The Labour Department's index number was *unweighted*, but the number published in future will be *weighted*, *i.e.*, in calculating the general trend of prices each commodity will be assigned its relative importance in the trade of the country. That a weighted index number is more accurate and useful than an

unweighted one is now generally conceded. Unless the list of commodities is very extensive a random selection does not always represent actual conditions; classes of commodities will accordingly be disproportionately represented and within each particular class the relative importance of individual items concealed.[1]

Statistical Tables.—In Table **28** are shown unweighted index numbers by groups of commodities, classified according to chief component materials, for years from 1890 to 1921. A weighted index number going back to 1913 is nearly ready for publication. Unweighted index numbers according to the above classification are also shown by months from 1919 to 1921 in Table **29.** Weighted general index numbers by months from 1919 to 1922 are presented in Table **30** while Table **31** contains weighted index numbers by groups of commodities for 1922. The variation between the weighted and the unweighted index numbers may be studied in the diagram on page 751.

Index numbers of Wholesale Prices for 1919, 1920 and 1921 on a classification by origins and degree of manufacture, are included by months in Table **32.** (See the variation between index numbers of raw or partly manufactured goods and those fully or chiefly manufactured goods, as shown in the diagram on page 751.)

Table **28** and the accompanying diagram show the movement of prices from 1890 to 1921. The index numbers have been calculated on the basis of the year 1913. The extraordinary rise since 1913 is very obvious. The year 1920 stands out as the "peak"; all groups, with the exception of non-ferrous metals, will be seen to have attained their highest yearly index in 1920.

28.—Index Numbers of Wholesale Prices in Canada, 1890-1921.

(Chief Component Material Classification).

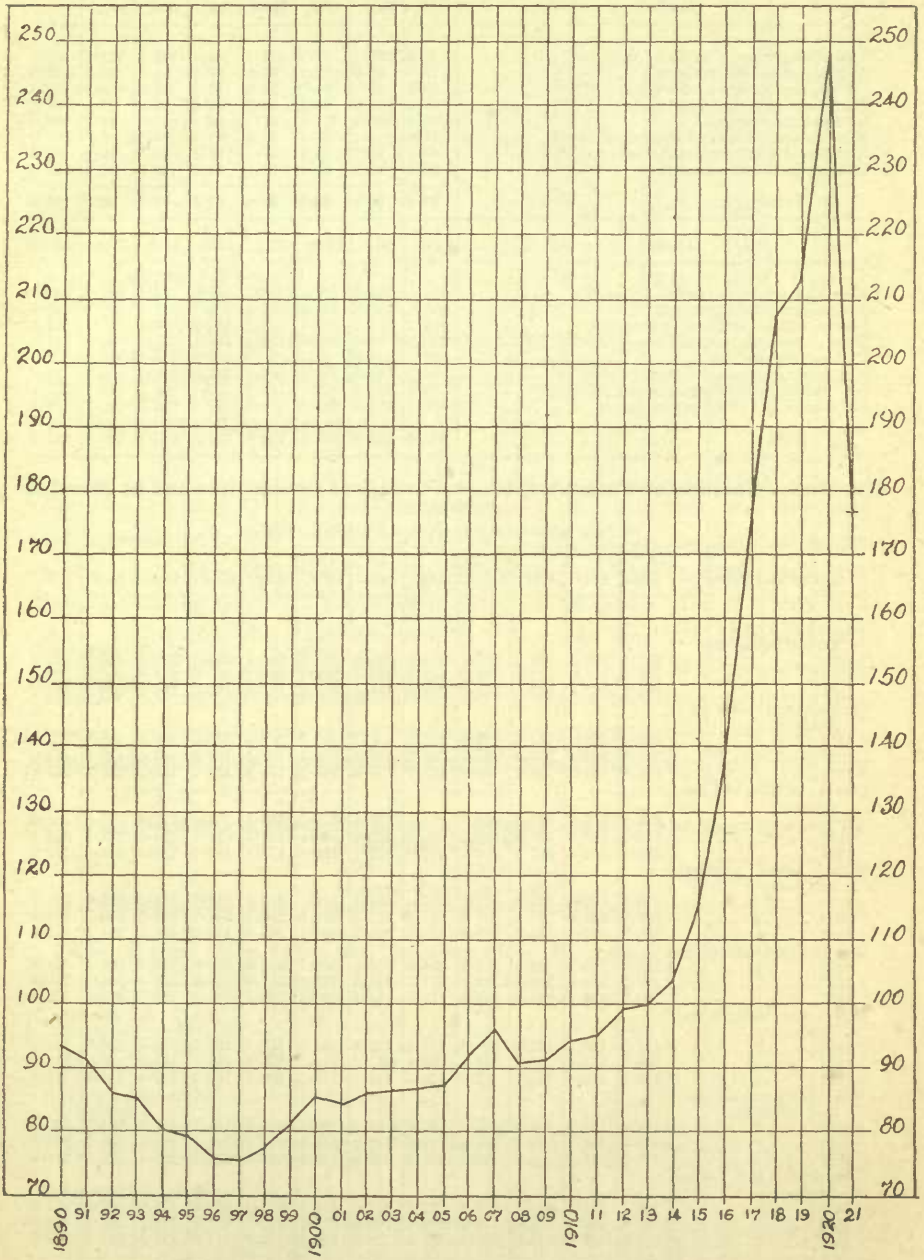
Groups.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.
Vegetable products (grains, fruits, etc.)	99·8	101·5	89·6	86·3	80·2	82·5	74·6	74·4
Animals and their products	62·5	61·3	60·7	64·4	59·0	57·6	54·6	56·5
Fibres, textiles and textile products	93·1	87·0	84·9	83·8	78·6	76·8	77·6	77·4
Wood, wood products and paper	70·8	70·8	71·5	71·3	71·4	70·1	67·9	67·5
Iron and its products	124·9	118·5	114·0	112·3	106·6	100·0	95·0	91·2
Non-ferrous metals and their products	112·0	102·0	92·1	85·8	74·5	72·0	72·5	72·3
Non-metallic minerals and their products	106·0	103·5	102·6	101·4	98·1	96·2	95·6	94·3
Chemicals and allied products	99·4	100·5	95·8	94·7	94·6	93·0	93·1	90·7
Total	**93·0**	**91·4**	**86·2**	**85·2**	**80·6**	**79·6**	**76·0**	**75·6**

Groups.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.
Vegetable products (grains, fruits, etc.)	79·7	81·7	84·9	86·1	90·1	89·4	91·2	90·2
Animals and their products	59·3	62·0	65·1	66·1	68·4	69·0	68·0	71·9
Fibres, textiles and textile products	77·8	81·1	86·1	81·5	81·3	83·1	86·1	88·9
Wood, wood products and paper	65·8	67·0	76·0	75·4	77·6	80·1	83·4	84·2
Iron and its products	91·3	103·7	115·9	105·8	103·1	103·1	99·5	99·0
Non-ferrous metals and their products	76·0	93·1	98·6	94·3	82·1	82·8	81·3	91·0
Non-metallic minerals and their products	95·2	97·4	91·5	91·8	96·8	100·3	94·6	92·1
Chemicals and allied products	90·4	88·2	95·5	93·3	95·9	96·4	97·8	96·4
Total	**77·8**	**81·4**	**85·8**	**84·5**	**86·2**	**86·9**	**87·0**	**87·8**

[1] For a fuller description of methods, see "Report on Prices and Price Indexes, 1918-1922," issued by the Dominion Bureau of Statistics, more especially Appendices A and B, pp. 127-133.

THE COURSE OF WHOLESALE PRICES IN CANADA, 1890-1921

AVERAGE PRICES 1913 = 100



28.—Index Numbers of Wholesale Prices in Canada, 1890-1921—concluded.

(Chief Component Material Classification)—concluded.

Groups.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
Vegetable products (grains, fruits, etc.)	97·3	136·2	97·2	101·1	105·7	108·6	111·9	100·0
Animals and their products	75·3	78·0	76·9	82·6	87·3	84·8	95·4	100·0
Fibres, textiles and textile products	93·5	96·2	86·7	85·0	87·8	88·8	90·0	100·0
Wood, wood products and paper	87·6	91·0	90·9	89·0	89·5	91·0	92·4	100·0
Iron and its products	101·6	105·9	101·8	97·3	96·9	96·9	97·3	100·0
Non-ferrous metals and their products	111·8	115·1	85·4	82·9	83·5	86·5	98·6	100·0
Non-metallic minerals and their products	93·2	92·8	90·2	87·1	88·7	86·1	91·2	100·0
Chemicals and allied products	96·6	97·7	95·1	91·3	93·7	95·3	97·1	100·0
Total	**92·6**	**96·2**	**90·9**	**91·4**	**94·3**	**95·0**	**99·5**	**100·0**

Groups.	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.
Vegetable products (grains, fruits, etc.)	109·3	124·1	121·8	158·6	198·0	224·2	267·7	162·7
Animals and their products	103·0	102·9	123·5	156·6	179·7	194·9	194·2	143·0
Fibres, textiles and textile products	101·2	110·7	142·9	196·2	266·2	278·7	311·1	192·3
Wood, wood products and paper	100·2	98·5	104·9	126·6	172·1	198·5	286·7	217·2
Iron and its products	98·5	102·0	144·1	211·2	234·9	206·5	242·4	206·7
Non-ferrous metals and their products	96·2	148·2	199·0	204·2	197·9	147·0	160·3	114·6
Non-metallic minerals and their products	99·5	103·2	121·1	172·5	200·1	195·7	243·3	230·9
Chemicals and allied products	106·1	143·9	202·5	221·7	252·4	222·7	289·7	229·5
Total	**103·5**	**115·6**	**137·3**	**174·6**	**207·8**	**213·2**	**248·2**	**147·3**

29.—Index Numbers of Wholesale Prices, by Groups of Commodities and by Months, 1919-1921.

(Chief Component Material Classification).

Groups and years.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Vegetable products, grains, fruits, etc.—												
1919	205·1	198·7	198·1	205·6	216·6	221·5	228·0	241·1	239·6	237·6	240·2	249·8
1920	269·7	277·0	287·2	299·0	312·3	306·1	295·7	258·2	249·0	233·8	216·8	200·0
1921	184·6	173·0	167·2	161·7	162·3	158·3	158·9	163·6	160·0	154·5	150·9	151·7
Animals and their products—												
1919	183·7	181·7	183·5	188·4	193·5	196·7	201·3	207·5	202·9	199·5	198·7	203·6
1920	207·8	209·5	207·9	206·5	203·7	192·4	193·1	189·1	190·4	183·3	175·4	171·0
1921	164·8	159·1	154·7	154·0	141·3	132·9	133·8	136·9	137·0	133·7	133·4	135·8
Fibres, textiles and products—												
1919	278·8	275·2	273·3	261·1	261·0	258·1	275·3	276·5	283·9	279·6	294·8	305·3
1920	313·7	323·0	325·2	337·5	338·7	330·8	328·1	323·0	313·6	298·2	277·4	246·1
1921	226·1	213·3	213·2	200·2	188·9	179·1	176·8	177·8	187·4	186·3	184·4	183·6
Wood, wood products and paper—												
1919	176·3	176·0	176·0	171·5	184·4	187·1	194·0	210·5	218·7	224·0	223·0	229·1
1920	252·1	262·8	273·0	301·8	305·1	292·0	303·9	298·3	297·7	298·5	289·3	263·8
1921	250·3	247·9	248·2	238·8	222·3	206·8	203·4	205·5	199·6	192·5	194·5	191·5
Iron and its products—												
1919	223·8	218·2	210·3	204·5	204·0	200·5	200·7	201·8	200·8	200·2	203·5	210·8
1920	214·1	219·6	230·8	229·2	237·7	241·3	246·5	251·0	259·2	261·8	261·4	259·8
1921	238·7	232·4	223·2	217·6	213·8	210·4	206·3	195·5	190·3	189·7	183·5	180·0
Non-ferrous metals and products—												
1919	157·5	142·1	133·4	128·6	132·4	137·4	149·2	154·2	155·7	156·8	156·7	159·3
1920	169·9	172·4	175·2	171·4	165·6	161·0	162·2	163·9	159·4	150·8	139·0	131·9
1921	126·7	120·6	116·1	115·0	120·5	115·1	113·2	108·5	108·9	107·9	109·9	112·1
Non-metallic minerals and products—												
1919	198·0	197·1	194·5	194·4	195·8	195·6	194·4	194·8	198·9	197·6	201·2	203·6
1920	202·7	203·7	206·7	225·6	232·5	242·2	247·6	257·2	264·1	267·0	264·7	261·8
1921	257·5	241·7	240·7	237·3	233·7	232·6	230·0	224·3	222·8	220·1	216·0	214·6
Chemicals and allied products—												
1919	226·6	223·2	226·1	219·4	223·3	221·6	214·5	222·4	222·0	221·6	227·8	234·6
1920	245·9	260·0	276·0	279·0	283·2	292·0	317·1	318·7	321·9	316·2	293·1	278·6
1921	268·9	252·5	245·0	233·6	227·5	226·0	219·2	222·2	217·0	217·3	212·7	209·5

30.—Weighted General Index Numbers, 1919-1922.

Months.	1919.	1920.	1921.	1922.
January	205·3	232·8	201·7	151·7
February	200·5	238·3	191·1	153·5
March	200·2	241·1	186·4	153·3
April	198·2	251·3	180·8	153·4
May	201·2	256·9	171·4	153·6
June	201·3	255·1	164·0	152·4
July	202·3	256·1	163·4	153·8
August	206·5	250·3	165·6	151·4
September	213·3	245·3	161·8	147·2
October	213·8	236·3	155·5	147·8
November	217·4	224·4	153·6	151·5
December	223·4	212·1	154·3	152·8
Averages for Years	**209·2**	**243·5**	**171·8**	**152·3**

31.—Weighted Index Number, by Groups, 1922.

(Chief Component Material Classification).

Groups.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Average.
Vegetable products	145·8	157·1	161·5	160·6	161·4	155·9	157·1	148·4	131·6	130·8	137·2	137·8	148·4
Animal products	136·8	135·0	133·3	136·8	131·2	130·5	133·7	133·3	131·3	133·3	139·8	143·7	135·4
Textiles	173·0	172·4	167·2	165·6	173·4	176·0	175·9	174·2	174·7	176·6	183·7	184·8	178·8
Wood	166·4	162·0	162·4	162·6	165·1	164·3	166·0	166·3	166·4	171·0	171·0	174·1	166·4
Iron	150·3	147·6	146·5	145·1	147·3	149·3	149·6	154·4	159·6	157·9	157·4	156·4	151·8
Non-ferrous metals	99·3	97·1	91·4	90·6	91·8	93·2	94·5	94·1	95·0	95·2	94·6	93·8	94·1
Non-metallic minerals	191·3	191·0	190·3	190·3	185·8	185·7	187·0	185·4	190·4	189·2	187·1	187·1	188·4
Chemicals	169·5	166·8	166·8	166·2	166·2	166·2	166·1	165·9	165·4	165·6	165·6	165·7	166·4
All commodities	**151·7**	**153·5**	**153·3**	**153·4**	**153·6**	**152·4**	**153·8**	**151·4**	**147·2**	**147·8**	**151·5**	**152·8**	**152·3**

32.—Index Numbers of Wholesale Prices by Origins and Degree of Manufacture, by Months, 1919-1921.

(Origin Classification).

(Average Prices, 1913=100).

Origins and years.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
(I) Articles of Farm Origin—												
(A) Vegetable.												
Raw or partly manufactured—												
1919	216·7	208·4	211·8	222·6	230·8	235·5	241·7	249·6	247·2	248·3	255·5	269·5
1920	290·3	304·8	307·9	322·4	351·0	352·7	318·1	276·3	246·8	231·4	222·9	202·6
1921	190·2	168·6	161·1	154·4	153·2	149·2	154·1	158·7	158·2	155·9	150·8	148·2
Fully or chiefly manufactured—												
1919	227·2	223·3	222·4	215·8	219·4	226·6	234·8	246·9	253·4	250·4	248·1	252·4
1920	264·3	276·0	282·7	294·2	299·9	302·2	307·0	280·4	290·7	269·9	244·9	224·2
1921	200·5	195·4	191·3	187·4	181·2	178·5	176·1	175·3	176·6	172·5	171·9	170·7

32.—Index Numbers of Wholesale Prices by Origins and Degree of Manufacture, by Months, 1919-1921—concluded.

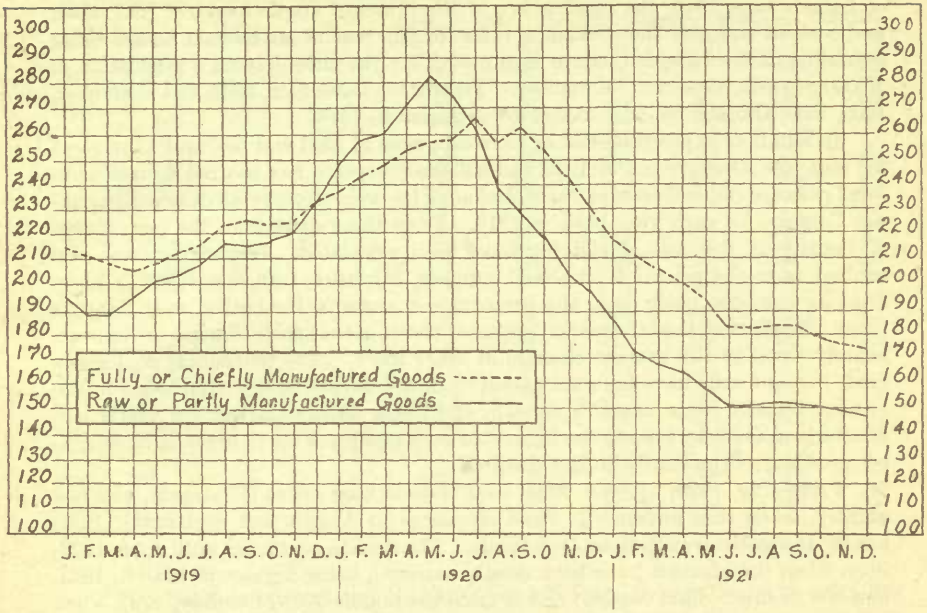
(ORIGIN CLASSIFICATION)—concluded.

(Average Prices, 1913=100).

Origins and years.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
(B) Animal.												
Raw or partly manufactured—												
1919	192·2	193·9	195·3	203·1	206·1	212·4	213·3	221·6	213·1	210·9	213·8	220·2
1920	235·1	235·7	232·0	223·5	212·9	192·6	192·1	182·9	187·5	179·2	172·2	164·3
1921	166·2	150·4	151·6	151·7	143·7	131·1	128·7	132·3	131·7	129·9	131·3	136·9
Fully or chiefly manufactured—												
1919	198·3	196·3	197·9	203·0	207·8	212·2	220·4	229·5	228·0	227·7	227·3	232·2
1920	236·5	237·9	238·9	240·1	239·6	236·2	234·3	233·5	228·5	223·2	214·9	208·4
1921	196·4	192·1	191·8	179·8	159·0	152·3	157·9	159·9	156·9	153·0	148·4	148·8
(2) Articles of Marine Origin—												
Raw or partly manufactured—												
1919	169·5	165·6	147·2	152·1	192·5	158·8	160·8	159·5	161·5	151·8	157·6	167·6
1920	160·8	159·8	159·8	159·8	188·6	171·2	171·2	171·2	171·2	171·2	171·2	171·2
1921	135·1	114·8	102·0	146·6	136·7	101·8	84·3	84·3	127·5	127·5	137·5	137·5
Fully or chiefly manufactured—												
1919	191·9	191·9	194·2	183·4	184·3	180·6	176·3	171·6	170·8	172·7	181·6	180·8
1920	169·2	172·4	172·4	171·8	177·2	162·1	169·8	174·1	179·4	177·1	160·9	165·0
1921	156·1	157·5	146·4	141·2	139·5	149·6	141·5	142·8	141·1	142·2	142·2	143·0
(3) Articles of Forest Origin—												
Raw or partly manufactured—												
1919	156·5	156·2	156·2	155·6	162·3	159·6	170·6	183·5	194·2	201·2	200·0	207·0
1920	233·6	247·6	254·8	290·0	294·3	277·0	287·7	280·4	279·1	276·9	264·9	238·1
1921	220·4	221·4	225·1	212·7	191·1	176·2	174·3	176·7	169·2	167·8	170·4	166·5
Fully or chiefly manufactured—												
1919	239·8	239·8	239·8	255·2	255·2	277·4	277·4	296·9	296·9	296·9	296·9	296·9
1920	311·8	311·8	331·4	340·0	340·0	340·0	356·0	356·0	357·2	367·9	367·9	346·4
1921	346·4	333·0	322·3	322·3	322·3	304·9	296·9	296·9	296·9	271·8	271·8	271·8
(4) Articles of Mineral Origin—												
Raw or partly manufactured—												
1919	177·1	169·4	161·7	158·1	163·3	163·3	165·2	169·4	168·7	169·9	173·1	183·0
1920	188·7	194·6	202·6	199·5	200·0	201·1	201·0	205·1	205·9	205·6	202·9	198·7
1921	185·3	174·3	171·8	168·9	168·4	165·8	163·4	159·7	159·6	158·9	158·1	156·8
Fully or chiefly manufactured—												
1919	215·4	210·0	205·2	199·6	199·7	198·1	198·2	199·4	201·4	200·5	203·7	206·7
1920	213·4	217·9	225·0	227·5	232·3	238·0	247·0	252·3	258·7	258·3	253·1	247·1
1921	239·6	229·0	221·9	217·3	214·7	211·8	209·2	201·5	197·1	195·9	191·1	188·9
(5) SUMMARY.												
All raw or partly manufactured—												
1919	194·1	188·6	188·6	194·5	201·6	203·6	208·6	216·5	215·5	216·3	220·6	231·2
1920	248·4	257·5	260·8	270·3	282·0	274·5	261·3	238·8	228·9	219·9	212·4	197·0
1921	186·3	171·5	168·4	164·0	158·0	150·4	150·9	152·9	152·7	150·9	149·5	147·4
All fully or chiefly manufactured—												
1919	215·4	211·7	209·9	206·9	209·1	212·5	216·6	223·5	226·0	224·7	225·5	232·1
1920	236·4	242·3	248·1	253·3	257·1	258·6	264·2	257·7	262·6	255·0	242·5	231·5
1921	218·1	211·0	206·0	200·2	192·7	183·0	183·3	183·8	183·2	179·7	176·6	173·8

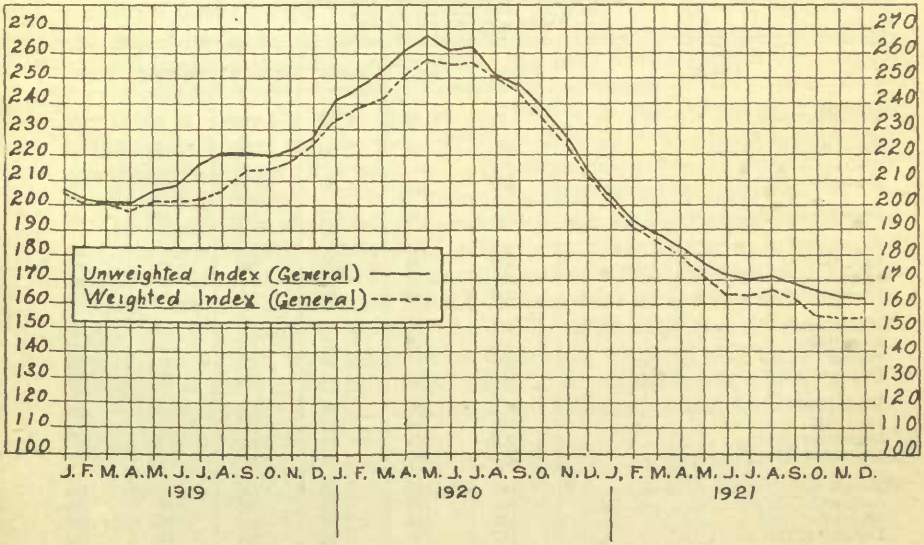
RAW AND FINISHED MATERIALS

Average Prices, 1913 = 100



WEIGHTED AND UNWEIGHTED INDEX

Average Prices 1913 = 100



2.—Retail Prices.

Statistics as to retail prices in Canada have been published by the Department of Labour since 1910, the retail prices of the principal staple foods, of coal, wood and coal oil and also the prevailing rates for the rent of six-roomed houses being published in the Labour Gazette each month for the cities having a population of 10,000 or more, some sixty in number. Figures for December, 1900, and December, 1905, were also secured in a special investigation in 1914.

In addition to the statistics as to retail prices of food and fuel and as to rates for rent, the Department in 1920 and subsequent years has secured figures as to retail prices of staple lines of clothing, including footwear, from retail dealers throughout Canada, for each year back to 1913. From these quotations the percentages of changes in the cost of clothing have been calculated. Information was also secured as to the prices of household supplies, furniture, furnishings, etc., and an estimate has been made as to the percentage changes in the cost of miscellaneous items, the effect of the information gathered showing that such changes are approximately equal to the average changes in other items. The percentage changes in food, fuel and rent have been calculated from the weekly budgets published in the Labour Gazette from month to month, and Table 33 summarizes the yearly and quarterly changes by groups, the figures for each group and for all items being weighted according to the family budget method.

From July, 1920, to June, 1921, food and clothing prices fell steeply, and fuel slightly, while rent advanced. Food recovered in August and September, 1921, but by December was back to June levels. The decline continued until June, 1922, since when the changes have been mostly seasonal, being highest in March, 1923, and low in July. Fuel declined slowly from the middle of 1921 to July, 1922, when it began to advance, reaching a peak in February, 1923. Since then the decline has been slight. Clothing and rent have shown little change in cost since 1921.

33.—Index Numbers of Changes in the Cost of Living in Canada, based upon weighted Retail Prices, 1910-1923

Average Prices, 1913 = 100.

Dates.	Food.	Fuel.	Rent.	Clothing.	Sundries.	Totals.
December, 1910	96	96	72	92	94	90
December, 1911	101	92	70	93	95	91
December, 1912	105	102	82	97	97	97
December, 1913	106	98	101	100	100	102
March, 1914	105	100	100	105	100	102
June, 1914	102	99	102	105	100	102
September, 1914	107	99	97	110	100	103
December, 1914	108	98	92	110	100	102
March, 1915	107	98	89	117	103	103
June, 1915	106	93	87	117	103	101
September 1915	105	97	85	125	105	103
December, 1915	111	97	84	125	105	104
March, 1916	114	97	83	134	108	107
June, 1916	116	98	85	134	108	108
September, 1916	122	101	86	143	110	113
December, 1916	138	110	86	143	110	119
March, 1917	146	119	88	155	128	128
June, 1917	162	125	92	155	128	135
September, 1917	159	128	93	167	145	140
December, 1917	167	133	94	167	145	143

33.—Index Numbers of Changes in the Cost of Living in Canada, based upon weighted Retail Prices, 1910-1923—concluded.

Average Prices, 1913 = 100.

Dates.	Food.	Fuel.	Rent.	Clothing.	Sundries.	Totals.
March, 1918	172	143	96	182	153	150
June, 1918	174	144	100	182	153	152
September, 1918	181	153	101	198	160	159
December, 1918	186	163	102	198	160	162
March, 1919	178	159	103	216	170	163
June, 1919	187	155	110	216	170	168
September, 1919	195	162	114	234	180	176
December, 1919	201	166	117	234	180	179
March, 1920	218	173	120	260	185	191
June, 1920	231	186	133	260	190	201
September, 1920	217	285	136	260	190	199
December, 1920	202	218	139	235	190	192
March, 1921	180	208	139	195	188	177
June, 1921	152	197	143	173	181	163
September, 1921	161	189	145	167	170	162
December, 1921	150	186	145	158	166	156
March, 1922	144	181	145	155	164	153
June, 1922	139	179	146	155	164	151
September, 1922	140	190	147	155	164	153
December 1922	142	187	146	155	164	153
March, 1923	147	190	147	155	164	155
June, 1923	139	182	147	155	164	152
September, 1923	142	183	147	155	164	153
October, 1923	145	183	147	155	164	154

The Dominion Bureau of Statistics, in addition to collecting and compiling wholesale prices, also collects the retail prices of over 80 commodities in some sixty cities in Canada. These are averaged by the Bureau with certain prices received through correspondents of the Labour Department, and are then handed over to the latter for insertion in the "Labour Gazette." The Labour Department also compiles a family budget from this material, together with data on fuel, lighting and rents collected by its own correspondents. The Bureau has made use of this material to obtain the tables which follow; the index numbers which they contain are the result of a special compilation made by the Bureau.

Table **34** shows the prices from 1913 to 1922 of the items which were included in the family budget and the index numbers of groups. The index numbers are weighted with the quantities used by the Department of Labour in computing their monthly family budget. Table **35** gives the group indexes by provinces.

An examination of the tables reveals the course of the budget, consisting of food, fuel, lighting and rents, over the period shown. The Dominion index for 1915 indicates a slight fall from 1914. From that year until 1920 the upward movement proceeds with only an occasional check. Early in 1919 there was a slight fall, but it was quickly succeeded by a steady rise to July, 1920, which was the peak month in retail prices (May, 1920, being the peak month in wholesale prices). The index then stood at 190·8 as compared with 100 in 1913. It fell to 152·8 in July, 1921, then rose slightly for a couple of months but afterwards began to decline again, being 152·4 in December, 1921.

In 1922 the cost of living declined still further, reaching 146·7 in May, but after that month rose again until an index of 149·6 was attained in December. The average for the year was 148·9.

34.—Prices and Index Numbers of a Family Budget of staple Foods, Fuel and

DOMINION AVERAGE

No.	Commodities.	Quantity.	Base 1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.
1	Beef, sirloin steak	1 lb.	·222	·244	·238	·252	·301	·364	·374	·389	·332
2	Beef, chuck, roast	1 "	·148	·168	·164	·170	·207	·260	·257	·251	·197
3	Veal, roast	1 "	·157	·173	·175	·187	·227	·272	·270	·274	·226
4	Mutton, roast	1 "	·191	·208	·209	·233	·281	·347	·348	·354	·292
5	Pork, fresh, roast	1 "	·195	·202	·192	·220	·296	·364	·384	·397	·328
6	Pork, salt mess	1 "	·176	·186	·177	·194	·268	·340	·359	·362	·309
7	Bacon, breakfast	1 "	·247	·259	·256	·288	·385	·494	·579	·559	·497
8	Lard, pure leaf	1 "	·192	·186	·178	·202	·297	·359	·392	·380	·239
9	Eggs, fresh	1 doz.	·337	·344	·327	·380	·489	·565	·621	·709	·529
10	Eggs, storage	1 "	·281	·320	·286	·327	·424	·489	·544	·608	·479
11	Milk	1 qt.	·086	·090	·088	·088	·104	·123	·138	·151	·139
12	Butter, dairy	1 lb.	·292	·286	·310	·344	·432	·485	·564	·631	·447
13	Butter, creamery	1 "	·339	·337	·354	·385	·480	·538	·630	·696	·519
14	Cheese, old	1 "	·205	·214	·237	·260	·330	·333	·383	·406	·369
15	Cheese, new	1 "	·191	·198	·216	·242	·304	·310	·361	·383	·335
16	Bread, plain, white	1 "	·041	·043	·047	·050	·070	·078	·079	·093	·081
17	Flour, family	1 "	·032	·035	·040	·042	·064	·068	·067	·079	·062
18	Rolled oats	1 "	·044	·045	·051	·049	·061	·079	·077	·084	·063
19	Rice, good, medium	1 "	·057	·061	·056	·066	·081	·114	·130	·164	·108
20	Beans, handpicked	1 "	·062	·062	·075	·098	·149	·168	·122	·117	·091
21	Apples, evaporated	1 "	·120	·128	·119	·134	·156	·223	·242	·286	·221
22	Prunes, medium	1 "	·119	·126	·125	·131	·154	·180	·219	·270	·198
23	Sugar, granulated	1 "	·059	·064	·080	·090	·100	·113	·123	·197	·114
24	Sugar, yellow	1 "	·055	·059	·072	·083	·093	·105	·115	·185	·109
25	Tea, black	1 "	·356	·376	·376	·396	·460	·572	·628	·644	·556
26	Tea, green	1 "	·372	·384	·360	·408	·452	·548	·624	·672	·608
27	Coffee	1 "	·376	·432	·360	·396	·404	·436	·524	·608	·560
28	Potatoes	1 pk.	·15	·205	·169	·294	·446	·346	·359	·658	·283
29	Vinegar, white wine	1 pt.	·064	·064	·064	·064	·064	·072	·072	·080	·080
30	**All Foods**	$	**7·337**	**7·731**	**7·866**	**8·793**	**11·42**	**13·01**	**13·88**	**15·99**	**12·10**
31	Index Number	–	100·0	105·4	107·2	119·8	155·6	177·3	189·2	217·9	164·9
32	Starch, laundry	1 lb.	·096	·096	·096	·099	·120	·141	·144	·144	·138
33	Coal, anthracite	1 ton	8·80	8·64	8·43	7·36	10·72	11·98	12·86	17·04	18·18
34	Coal, bituminous	1 "	6·19	6·10	5·89	6·30	8·43	9·54	10·00	12·38	12·70
35	Wood, hard, best	1 cord	6·80	6·80	5·89	6·86	8·46	11·30	12·34	13·09	13·79
36	Wood, soft	1 "	4·90	5·01	4·93	4·93	6·22	8·35	9·12	10·14	10·26
37	Coal oil	1 gal.	·237	·236	·233	·230	·250	·273	·287	·365	·354
38	Fuel and lighting	–	100·0	99·4	95·7	100·9	124·1	149·6	160·6	192·1	199·0
39	Rent, 1 month	–	19·32	19·00	16·49	16·14	17·28	18·88	20·80	24·80	27·08
40	Index Number	–	100·0	98·3	85·3	83·5	89·4	97·7	107·7	128·4	140·2
41	**Grand Total**	–	**14·104**	**14·408**	**13·844**	**14·784**	**18·145**	**20·637**	**22·169**	**25·908**	**22·706**
42	Index Number	–	100·0	102·2	98·4	104·8	128·7	146·3	157·3	183·7	161·0

Lighting and Rent, in Sixty Cities in Canada, 1913-1921, and by months for 1922.
FOR 1913=100.

1922													No.
Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.	
·273	·277	·283	·288	·298	·316	·321	·317	·302	·291	·277	·264	·292	1
·152	·157	·161	·162	·167	·175	·178	·173	·162	·159	·150	·143	·162	2
·189	·188	·197	·190	·190	·191	·191	·187	·184	·187	·184	·180	·188	3
·256	·262	·266	·274	·287	·293	·280	·281	·273	·272	·269	·265	·273	4
·267	·275	·295	·300	·300	·313	·318	·320	·311	·300	·279	·264	·295	5
·260	·258	·262	·266	·261	·268	·271	·272	·269	·269	·259	·261	·265	6
·398	·393	·405	·413	·408	·413	·425	·427	·425	·416	·409	·410	·412	7
·217	·208	·215	·225	·220	·220	·218	·222	·225	·227	·229	·230	·221	8
·712	·562	·507	·335	·327	·335	·339	·350	·358	·417	·516	·603	·447	9
·587	·477	·456	·306	·305	·317	·314	·328	·324	·374	·437	·461	·390	10
·133	·130	·127	·124	·121	·115	·115	·115	·115	·116	·117	·119	·121	11
·417	·389	·375	·382	·387	·357	·351	·357	·367	·384	·388	·382	·378	12
·486	·447	·435	·449	·454	·420	·420	·433	·428	·430	·437	·444	·440	13
·326	·319	·311	·305	·307	·298	·300	·301	·307	·276	·285	·306	·303	14
·293	·287	·284	·285	·279	·261	·262	·267	·266	·276	·285	·306	·279	15
·070	·070	·070	·070	·070	·069	·070	·070	·069	·068	·067	·067	·069	16
·048	·047	·048	·048	·049	·050	·049	·049	·048	·045	·044	·044	·047	17
·056	·055	·055	·056	·055	·056	·056	·056	·056	·056	·055	·055	·056	18
·098	·096	·096	·093	·095	·098	·099	·094	·093	·106	·106	·104	·098	19
·087	·085	·086	·089	·088	·089	·088	·089	·089	·087	·085	·084	·087	20
·220	·217	·226	·230	·235	·241	·249	·246	·250	·239	·226	·225	·234	21
·084	·185	·184	·189	·192	·197	·198	·199	·201	·196	·198	·191	·193	22
·092	·088	·086	·084	·080	·078	·084	·089	·090	·087	·090	·093	·087	23
·087	·083	·082	·080	·076	·073	·079	·083	·085	·082	·085	·088	·082	24
·540	·544	·544	·544	·544	·548	·556	·564	·568	·584	·592	·592	·560	25
·604	·600	·588	·600	·608	·600	·608	·620	·624	·584	·592	·592	·602	26
·544	·540	·532	·536	·516	·540	·536	·536	·532	·536	·532	·540	·535	27
·263	·266	·260	·246	·229	·228	·219	·291	·241	·202	·191	·189	·235	28
·080	·080	·080	·080	·080	·072	·080	·080	·080	·072	·072	·080	·780	29
11·034	**10·609**	**10·543**	**10·258**	**10·216**	**10·176**	**10·266**	**10·442**	**10·279**	**10·226**	**10·286**	**10·393**	**10·394**	30
150·4	144·6	143·7	139·8	139·3	138·7	140·0	142·3	140·1	139·4	140·2	141·6	141·7	31
·126	·126	·123	·123	·120	·123	·120	·120	·120	·120	·120	·120	·122	32
17·536	17·440	17·392	17·392	17·200	17·184	16·928	17·264	18·832	18·608	18·496	18·288	17·713	33
11·472	11·280	10·992	10·928	10·848	10·928	11·008	11·104	12·016	12·320	12·288	12·048	11·436	34
12·832	12·736	12·592	12·496	12·432	12·304	12·320	12·368	12·576	12·848	12·656	12·608	12·564	35
9·568	9·104	9·360	9·296	9·280	9·184	9·360	9·472	9·536	9·504	9·472	9·424	9·380	36
·317	·317	·317	·316	·316	·312	·313	·311	·310	·310	·310	·311	·313	37
184·8	182·7	181·2	180·6	179·6	178·5	178·5	180·1	189·5	190·6	189·5	187·4	183·6	38
27·68	27·72	27·64	27·64	27·56	27·80	27·80	27·84	27·84	27·84	27·76	27·80	27·74	39
143·3	143·5	143·1	143·1	142·7	143·9	143·9	144·1	144·1	144·1	143·7	143·9	143·6	40
21·523	**21·072**	**20·961**	**20·656**	**20·569**	**20·578**	**20·670**	**20·884**	**20·898**	**20·865**	**20·885**	**20·971**	**20·877**	41
153·5	150·3	149·5	147·4	146·7	146·8	147·4	148·9	149·1	148·8	148·9	149·6	148·9	42

35.—Index Numbers of a Family Budget of staple Foods, Fuel and Lighting and Rent, in Canada, by Provinces and Months, 1922.

(Dominion Average for 1913=100)

Staple Foods.

Provinces.	1922.												
	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
P. E. Island	133·3	133·2	133·6	131·9	127·7	129·5	126·6	127·0	131·7	124·2	126·3	129·2	129·5
Nova Scotia	152·4	147·9	147·6	142·7	141·3	140·4	140·5	141·9	141·1	142·0	141·7	143·2	143·6
New Brunswick	151·4	148·3	146·9	143·7	139·2	140·2	136·2	140·8	141·2	138·2	140·2	143·2	142·5
Quebec	144·9	139·4	137·7	133·8	131·1	130·0	132·5	136·3	133·3	132·9	134·1	136·3	135·2
Ontario	148·3	142·6	141·6	139·0	138·1	137·4	140·1	141·9	138·7	138·2	138·9	140·5	140·4
Manitoba	148·2	142·4	141·9	135·2	136·4	134·8	136·6	140·0	132·9	132·5	132·8	134·5	137·3
Saskatchewan	150·7	144·6	144·2	133·8	138·3	136·7	133·8	135·8	135·2	135·6	135·1	139·7	138·6
Alberta	149·1	139·2	138·6	134·0	134·3	136·6	134·4	139·8	136·3	133·2	136·2	137·5	137·4
British Columbia	164·6	158·0	156·3	155·8	156·3	156·5	154·0	158·5	158·0	158·2	158·8	156·1	157·6

Fuel and Lighting.

P. E. Island	168·0	169·0	170·6	168·5	169·0	166·9	175·9	175·9	177·4	182·2	185·8	185·8	174·6
Nova Scotia	166·9	164·8	161·2	161·2	156·4	160·1	154·3	154·3	158·5	171·1	165·9	165·9	161·7
New Brunswick	181·1	177·4	173·8	173·2	173·2	171·1	169·0	169·0	171·1	169·6	173·8	175·3	173·1
Quebec	185·3	183·7	183·7	182·2	176·9	176·4	175·9	174·3	194·8	189·0	188·5	187·4	183·1
Ontario	189·0	186·9	186·4	184·3	183·7	182·7	184·3	186·9	198·4	203·7	199·0	197·4	190·2
Manitoba	195·3	187·9	189·0	191·6	188·5	189·5	189·5	191·6	201·0	202·6	204·7	202·6	194·5
Saskatchewan	212·1	210·0	207·9	207·9	210·5	210·5	207·9	207·9	195·3	197·9	202·1	199·5	205·8
Alberta	130·7	130·7	124·4	123·4	122·3	121·3	120·7	142·3	134·9	125·5	139·1	140·7	129·7
British Columbia	178·0	175·3	174·3	177·4	177·4	177·4	153·3	155·4	157·5	154·3	156·4	155·9	166·0

Rent.

P. E. Island	116·6	116·6	116·6	116·6	116·6	116·6	116·6	116·6	116·6	116·6	121·7	121·7	117·4
Nova Scotia	124·2	124·2	124·2	124·2	122·8	122·8	122·8	122·8	122·8	122·8	122·8	122·8	123·3
New Brunswick	126·9	126·9	126·9	126·9	126·9	133·3	133·3	133·3	136·4	136·4	136·4	136·4	131·7
Quebec	109·5	111·8	111·8	112·2	113·3	115·3	115·3	115·3	113·7	113·7	113·7	115·3	113·4
Ontario	152·4	152·4	151·3	151·8	152·6	153·2	153·2	153·2	153·2	153·2	152·2	152·2	152·6
Manitoba	181·2	181·2	181·2	181·2	181·2	181·2	181·2	181·2	181·2	181·2	181·2	181·2	181·2
Saskatchewan	181·2	181·2	181·2	181·2	181·2	181·2	181·2	184·5	184·5	184·5	184·5	184·5	182·5
Alberta	161·7	161·7	161·7	155·3	161·7	161·7	161·7	161·7	161·7	161·7	161·7	161·7	161·2
British Columbia	132·1	132·1	132·1	132·1	132·1	132·1	132·1	132·1	132·1	132·1	132·1	132·1	132·1

Grand Total.

P. E. Island	132·3	132·4	132·8	131·7	129·5	130·2	129·9	130·1	132·7	129·5	132·9	134·4	131·5
Nova Scotia	144·7	142·1	141·4	138·9	137·1	137·1	136·3	137·1	137·2	139·4	138·5	139·3	139·1
New Brunswick	147·1	144·9	143·7	141·9	139·6	142·1	139·7	142·1	143·6	141·9	143·5	145·3	143·0
Quebec	138·3	136·0	135·1	133·0	131·2	131·3	132·5	134·3	134·9	133·9	134·5	136·1	134·3
Ontario	155·2	151·9	151·0	149·5	149·2	149·0	150·6	151·9	151·8	152·2	151·6	152·2	151·4
Manitoba	165·8	161·9	161·7	158·6	158·8	158·1	159·0	161·1	158·7	158·7	159·1	159·7	160·1
Saskatchewan	169·5	166·0	165·5	160·1	162·8	161·9	160·1	162·2	160·2	160·8	161·1	163·1	162·8
Alberta	151·0	145·8	144·6	139·9	142·1	143·2	141·9	147·7	144·9	141·9	145·3	146·3	144·5
British Columbia	155·3	151·4	150·5	150·6	150·9	151·0	146·4	149·0	149·0	148·8	149·3	147·5	150·0

XI.—FINANCE.

The Finance section of the present edition of the Year Book is divided into four main parts. The first of these, Public Finance, includes an account of Dominion, provincial and municipal finance, with the latest available statistics. The second part deals with Currency and Banking and Loan and Trust Companies. This is followed by a historical and statistical treatment of Insurance, including Government Annuities, while the section concludes with a treatment of Commercial Failures.

I.—PUBLIC FINANCE.

The following treatment of public finance includes a discussion of Dominion, provincial and municipal finance in Canada, with numerous tables, and closes with a brief discussion of the national wealth and national income of the Dominion as the basis of all public finance.

In recent years the subject of public finance has been more elaborately treated than formerly, in response to an increasing public demand, resulting from the growing pressure of taxation to meet the augmented expenditures of the national, provincial and local administrations. In the consideration of these growing expenditures two facts must be kept in mind:—(1) that our country is showing a relatively rapid growth of population—22 p.c. in the 10 years from 1911-1921, and (2) that $1.50 in 1923 has approximately the same purchasing power as $1 in 1913. Further, the effect of this latter fact in swelling the aggregated total income of the citizens of Canada so as to increase their tax-paying power should not be forgotten.

The great increase in Dominion expenditure since 1913 has, of course, been mainly due to the war and the burden of interest, pension charges, soldiers' civil re-establishment, etc., resulting from the war, as well as to the necessity of making good the deficits arising from the operation of the Canadian National Railways and the Canadian Government Merchant Marine. Similar increases have also taken place during the same period in provincial and municipal expenditure. In 1922 the total ordinary expenditure of provincial governments was in the neighborhood of $113,000,000 as compared with $53,826,219 in 1916, only six years before. (The aggregate interest payments of provincial governments increased from $7,817,844 in 1916 to $19,818,266 in 1921.) Again, between 1913 and 1921, the aggregate taxes imposed by the municipalities of Ontario increased from $34,231,214 to $83,017,612—an increase of 142·5 p.c. Similarly, in Quebec the aggregate expenditures of the municipalities increased from $19,139,465 in 1914 to $48,763,253 in 1921, an increase of 154·7 p.c. In Manitoba the increase in municipal taxation has been from $9,922,537 in 1912 to $19,502,894 in 1922, an increase of 94·5 p.c. These statistics, covering nearly two-thirds of the population of the Dominion, are from provincial government reports, and the growth which they show has doubtless also occurred in most of the other provinces.

I.—Dominion Public Finance.

Historical Sketch.—Both under the French *régime* and in the earlier part of the British, the territorial or casual revenues of Canada, consisting of certain seigneurial dues and the proceeds of the sale of government timber and land, were reserved to the Crown, while the right of levying taxes and of regulating the trade and commerce of the colony was after 1763 deemed to be vested in the British Parliament.

By the Quebec Act of 1774, certain duties on spirits and molasses were imposed, to be expended by the Crown in order to provide a revenue "towards defraying the expenses of the administration of justice and the support of the civil government of the province." A little later, in 1778, the British Government, by the Declaratory Act (18 Geo. III, c. 12), renounced forever the right of taxing the colonies to provide Imperial revenue, but maintained its claim to impose duties considered necessary for the regulation of trade, the proceeds to go towards defraying the expenditures of the colonial administration. After the Constitutional Act of 1791, the customs duties remained under the control of the Imperial Government, their revenue, as well as the territorial revenue above mentioned, coming in to the executive administration independently of the Legislative Assembly and thus making the executive power largely independent of the legislature. In case these revenues proved insufficient, recourse could generally be had to the grant made by the Imperial Government for the support of the army. As time went on, however, the Crown revenues became more and more inadequate to meet the increasing expenditure, while the wave of economy after 1815 in Great Britain made it impossible any longer to supplement these revenues from military sources. On the other hand, the purely provincial revenues collected under the authorization of the provincial legislature showed an increasing surplus. The power of the purse thus began to pass into the hands of the legislatures; in 1831 the British Parliament passed an Act placing the customs duties at the disposal of the legislatures.

Under the Act of Union a consolidated revenue fund was established. All appropriation bills were required to originate in the Legislative Assembly, which was forbidden to pass any vote, resolution or bill involving the expenditure of public money unless the same had been first recommended by a written message of the Governor-General. The British Government surrendered all control of the hereditary or casual revenues, which were thenceforth paid into the treasury of the province to be disposed of as its legislature should direct.

At the interprovincial conferences which took place prior to Confederation it was decided that the new Dominion Government, which was to take over permanently as its chief source of revenue the customs and excise duties that had yielded the greater part of the revenues of the separate provinces (direct taxation being as unpopular in British North America as in other new countries), was also to assume the provincial debts and to provide out of Dominion revenues definite cash subsidies for the support of the Provincial Governments. (See Tables **16** and **17**.) Until the Great War, which made other taxes necessary, the customs and excise revenue constituted the chief resource of the Dominion Government for general purposes—the post office revenue and railway receipts which, properly speaking, are not taxes at all, being mainly or entirely absorbed by the expense of administering these services. Indeed, for many years preceding the war, customs and excise duties, together with the revenue secured by the head tax on Chinese immigrants, were the only items of receipts which were classified by the Department of Finance as taxes. In the last fiscal year of peace, these two items aggregated $126,143,275 out of total receipts on consolidated fund account amounting to $163,174,395, the post office and government railways furnishing between them $26,348,847 of the remainder, offset, however, by expenditure on these two services amounting to $27,757,196. Miscellaneous revenue, largely fees, amounted in that year to $10,682,273—a comparatively small fraction of the total. As both customs and excise taxes were indirect, the average Canadian felt but little the pressure of taxation for Dominion purposes.

The war enormously increased the expenditure, and this increase had in the main to be met by loans. It is, however, a cardinal maxim of public finance that where loans are contracted, sufficient new taxation should be imposed to meet the interest charge upon the loans and to provide a sinking fund for their ultimate extinction. This war taxation was begun in Canada within the first weeks of the war, when in the short war session of August, 1914, increases were made in the customs and excise duties on various commodities, including coffee, sugar, spirituous liquors and tobacco. In 1915 special additional duties of 5 p.c. *ad valorem* were imposed on commodities imported under the British Preferential Tariff and 7½ p.c. *ad valorem* on commodities imported under the Intermediate and General Tariff, certain commodities being exempted. New internal taxes were also imposed on bank circulation, on the income of trust and loan companies, on insurance other than life and marine companies, on telegrams and cablegrams, railway tickets, sleeping car berths, etc., also on cheques, postal notes, money orders, letters and post cards. In the following year the Business Profits War Tax (dropped in 1921) was introduced, and in 1917 an Income Tax was imposed. In 1918 both of these taxes were increased and their application widened, and in 1919 the income tax was again increased, and still further augmented in 1920, by a surtax of 5 p.c. of the tax on incomes of $5,000 and over; the sales tax was also introduced in that year. This sales tax was increased in 1921 and again in 1922, while another increase becomes effective Jan. 1, 1924. The cumulative result of these war taxes was that in the fiscal year ended Mar. 31, 1921, customs duties were for the first time displaced from their position as the chief factor in Canadian revenue, the war taxes yielding $168,385,327 as against the customs yield of $163,266,804. In 1922 war taxes yielded $177,484,161, while the yield of the customs fell to $105,686,645. Again, in 1923 the war taxes yielded $181,634,875 and customs duties $118,056,469. Amongst the war taxes, income tax yielded $78,684,355 in 1922 and $59,711,538 in 1923.

A more detailed sketch of the new taxation imposed during and following the war is appended for reference:—

War Taxation in Canada.—War taxation began in Canada almost simultaneously with the outbreak of the war. In the short war session of August, 1914, the Customs Tariff Amendment Act (chap. 5), and an Act to amend the Inland Revenue Act (chap. 6), provided for increases in the customs and excise duties on various commodities, including coffee, sugar, spirituous liquors and tobacco. In the 1915 session the Customs Tariff War Revenue Act, 1915, imposed duties or additional duties of 5 p.c. *ad valorem* under the British Preferential Tariff, and of 7½ p.c. *ad valorem* under the Intermediate and General Tariffs on all goods in Schedule A of the Customs Tariff, whether dutiable or free of duty, subject to exemptions of which the chief were, fish caught by Canadian and Newfoundland fishermen, goods used in the manufacture of agricultural machinery and of binder twine, certain goods used for medical and surgical purposes, anthracite coal, steel for the manufacture of rifles, silk, chemical fertilizers, cotton seed cake and cotton seed cake meal. By the Special War Revenue Act (chap. 8), new taxes were imposed as follows: on every bank, ¼ of 1 p.c. on the average amount of its notes in circulation during each three months period; on every trust and loan company, 1 p.c. on its Canadian income; on every insurance company other than life and marine insurance companies, 1 p.c. of its net premiums received in Canada. Further, taxes were imposed of 1 cent on every cablegram or telegram for which a charge of 15 cents or more was made; 5 cents on the first $5 and 5 cents on every additional $5 on railway and steamboat tickets to places in North America and the British West Indies, and on tickets to places outside of these, $1 if the price exceeded $10, $3 if it exceeded $40, and $5 if it exceeded $65; 10 cents on every sleeping car berth and 5 cents on every parlour car seat; all the foregoing taxes to be collected by the companies concerned and transmitted to the Government. The same Act

imposed the following stamp duties: 2 cents on every bank cheque and on every express and post office money order and 1 cent on every postal note, 2 cents on every bill of lading, 1 cent extra on every letter and post card, 1 cent for every 25 cents of the retail price of proprietary medicines and perfumery, 3 cents for a pint or less and 5 cents for every quart of non-sparkling wine, and 13 cents for ½ pint or less and 25 cents for every pint of sparkling wine.

By 1916 it was seen that still further taxation was required to maintain the finances of the Dominion in a satisfactory condition. As a result, the Business Profits War Tax of that year (chap. 11), was passed, imposing a tax of 25 p.c. of the amount by which the profits earned in business owned by an incorporated company exceeded 7 p.c. per annum, or, in a business owned by any other person or association, exceeded 10 p.c. per annum upon the capital employed in the business. Businesses employing less than $50,000 capital, life insurance companies, businesses engaged in farming and live stock raising, and businesses of which 90 p.c. or more of the capital was owned by a province or a municipality were exempted, these exemptions not to apply to businesses engaged to the extent of 20 p.c. or over in manufacturing or dealing in munitions or war materials or supplies.

In the 1917 session the Business Profits War Tax Act was amended (chap. 6), to provide for a tax of 50 p.c. on profits in excess of 15 p.c. per annum, but not exceeding 20 p.c. per annum, and a tax of 75 p.c. on profits in excess of 20 p.c. per annum. In the same session the Income War Tax Act (chap. 28) imposed a tax of 4 p.c. on incomes exceeding $2,000 in the case of unmarried men and widows and widowers without children, and on incomes exceeding $3,000 in the case of other persons. A super-tax was also imposed, progressing from 2 p.c. on the amount by which an income exceeded $6,000 but did not exceed $10,000, up to 25 p.c. on the amount by which an income exceeded $100,000.

In the session of 1918 the Business Profits War Tax Act was amended by chapter 10, extending the operation of the Act to businesses having a capitalization of from $25,000 to $50,000. The Income War Tax Act, as amended by chapter 25, lowered the limit of exemption to $1,000 for unmarried persons and childless widows and widowers and to $2,000 for other persons, the former paying 2 p.c. on incomes between $1,000 and $1,500, the latter 2 p.c. on incomes between $2,000 and $3,000. The normal tax remained at 4 p.c., but the supertax was increased on incomes exceeding $200,000, being graduated up to 50 p.c. on incomes exceeding $1,000,000. A surtax was also introduced, ranging from an additional 5 p.c. of the combined normal tax and super-tax on incomes between $6,000 and $10,000, to an additional 25 p.c. of the normal and super-tax on incomes exceeding $200,000, corporations to pay a tax of 6 p.c. on incomes exceeding $3,000, but no super-tax or surtax. By the Customs Tariff Amendment Act (chap. 17) increased duties were imposed on tea, coffee and tobacco, and by the Act to amend the Special War Revenue Act, 1915 (chap. 46), increased or new taxes were imposed as follows — for each seat or berth in a parlour or sleeping car 10 cents and 10 p.c. of the price of the seat or berth; 1 cent on every hundred matches and 8 cents on every package of 54 or fewer playing cards with customs duties of the same amount on these articles when imported; 10 p.c. of the selling price on passenger automobiles, gramophones, etc., and records therefor, mechanical piano players and records therefor and jewelry.

In the 1919 session, the Business Profits War Tax was renewed (chap. 39) for the calendar year 1919: in the case of businesses having a capital between $25,000 and $50,000, profits in excess of 10 p.c. were now to be taxed 25 p.c., businesses having a capital of $50,000 or more to be taxed at the same rate as in previous years. The Income War Tax Act was amended by chapter 55, which increased the general rate of taxation. All corporations paid 10 p.c. of their net income in excess of $2,000, as against 6 p.c. under the former Act. In respect of individuals, the normal rate of 4 p.c. was to be levied on all incomes exceeding $1,000, but not exceeding $6,000, in the case of unmarried persons and widows or widowers without dependent children, and upon all incomes exceeding $2,000 but not exceeding $6,000 in the case of all other persons, the respective minima of $1,000 and $2,000 being exempt from taxation. A normal tax of 8 p.c. was levied on the excess of all incomes over $6,000. The surtax was imposed on a progressive scale on all incomes of over $6,000, applying first at the rate of 1 p.c. on the amount by which the income exceeded $5,000 and did not exceed $6,000; then at the rate of 2 p.c. on the amount by which the income exceeded $6,000 and did not exceed $8,000;

then at a rate increasing by 1 p.c. for each $2,000 increase of income up to $100,000, so that 48 p.c. was levied on the amount by which the income exceeded $98,000 and did not exceed $100,000; then at 52 p.c. on the amount by which the income exceeded $100,000 and did not exceed $150,000; 56 p.c. on the excess between $150,000 and $200,000; 60 p.c. on the excess between $200,000 and $300,000; 63 p.c. on the excess between $300,000 and $500,000; 64 p.c. on the excess between $500,000 and $1,000,000; 65 p.c. on the excess income over $1,000,000. Chapter 47 provided for the entire repeal of the extra duty of 5 p.c. *ad valorem* added to the British Preferential Tariff under the Customs Tariff War Revenue Act, 1915, and for the partial repeal in respect of the intermediate and general tariff rates of the excess of 7½ p.c. imposed under the same Act; also for the free importation into Canada of wheat, wheat flour and potatoes from countries not imposing a customs duty on such articles when grown or produced in Canada. Five cents per lb. was deducted from the duty on roasted or ground coffee under the preferential, intermediate and general tariff schedules and 3 cents per lb. was deducted from the duty on British grown teas under the preferential tariff. Under the general tariff the Act provided for a total reduction (including the 7½ p.c. war duty) from 27½ p.c. to 15 p.c. on cultivators, harrows, horserakes, seed-drills, manure spreaders and weeders and complete parts thereof; from 27½ p.c. to 17½ p.c. on ploughs and complete parts thereof, windmills and complete parts thereof, portable engines and traction engines for farm purposes, horse-powers and threshing machine separators and appliances therefor. On hay-loaders, potato diggers, fodder or feed cutters, grain crushers, fanning mills, hay tedders, farm, road or field rollers, post-hole diggers, and other agricultural implements, provision was made for a reduction of duty to 20 p.c. with a similar reduction on farm wagons. Respecting cement, the war customs duty was repealed and the general tariff rate reduced to 8 cents per 100 lbs. Specific instead of *ad valorem* rates of duty were enacted for pig-lead, zinc spelter, and copper ingots.

In the session of 1920 chapter 36 amended the Business Profits War Tax Act by exempting from tax profits which during the year 1920 did not exceed 10 p.c. of the capital employed; upon profits exceeding 10 p.c. up to 14 p.c. there was a tax of 20 p.c. of the profits; from 15 to 20 p.c., a tax of 30 p.c.; from 20 to 30, a tax of 50 p.c.; exceeding 30, a tax of 60 p.c. In any business with a capital of $25,000 to $50,000, 20 p.c. tax was charged on the amount by which profits exceeded 10 p.c. of capital; this was also to apply in respect of the profits earned in 1917, 1918 and 1919 on businesses having capital less than $50,000 if 20 p.c. or more of such profits had been derived from business carried on for war purposes. Chapter 49 amended the Income War Tax Act of 1917 in the following particulars: (1) empowering the Minister to determine deficits and losses; (2) taxing dividends or shareholders' bonuses; (3) taxing income from an estate or accumulating on trust; (4) increasing by 5 p.c. tax and surtax on incomes of $5,000 or more; (5) requiring that one-quarter tax be forwarded with return, the balance being payable, if desired, by 3 bimonthly instalments with interest at 6 p.c.; (6) imposing severe penalties for default. Chapter 71 amended the Special War Revenue Act of 1915 by imposing a stamp tax on bills and notes, bank statements, overdrafts, bank cheques, sale or transfer of stock, etc.; also by imposing new excise taxes on certain classes of goods, ranging from 3 p.c. to 50 p.c. according to use or value of the goods, and specific duties on certain fluids. In addition, a tax of 1 p.c. was imposed upon wholesale and manufacturers' sales.

In the session of 1921, the excise duties on spirits were increased from a basic rate of $2.40 per proof gallon to a basic rate of $9.00 per proof gallon, the old rates being continued, however, where the spirits were used by licensed manufacturers of patent and proprietary medicines, extracts, essences and pharmaceutical preparations. Under chapter 50 the tax on sales and deliveries by manufacturers and wholesalers and jobbers was raised from 1 p.c. to 1½ p.c. and in the case of sales by manufacturers directly to retailers and customers from 2 p.c. to 3 p.c. Where goods were imported, the rates under similar circumstances were raised from 2 p.c. to 2½ and 4 p.c. respectively. The details of the new taxes imposed in 1922 and 1923 will be found under the heading "Dominion Legislation."

Summary statistics of the war tax revenue from 1915 to 1923 are given in Table 8 and detailed statistics of the war tax revenue collected by the Inland Revenue Department in 1923 in Table 9. In Table 10 are furnished statistics of the yield of the income tax by provinces for the years 1922 and 1923.

Balance Sheet.—A summary review of the financial situation of the Dominion as on Mar. 31, 1923, is given in the balance sheet shown on this page. This shows the gross debt on the above date to have been $2,888,827,237, partly offset by available assets aggregating $435,050,368, leaving a net debt of $2,453,776,869.[1] Non-available assets, including such public works as canals and railways, also loans to railways, amount in the aggregate to $1,433,433,008, leaving a debit balance on Consolidated Fund Account on Mar. 31, 1923, of $1,020,343,861. The details of the various assets and liabilities are contained in the schedules accompanying the balance sheet and printed in the Public Accounts.

1.—Balance Sheet of the Dominion of Canada, as at March 31, 1923.

ASSETS— (From the Public Accounts).		
Cash on hand and in Banks		$ 4,256,042
Specie Reserve		130,150,335
Advances to Provinces, Banks, etc.		75,433,038
Advances to Imperial and Foreign Governments		106,540,470
Soldier Land Settlement Loans		83,325,152
Miscellaneous Current Accounts		35,345,331
Balance being Net Debt, March 31, 1923 (exclusive of interest accrued and outstanding), carried forward		2,453,776,869
		$ 2,888,827,237
Public Works, Canals		144,447,672
Public Works, Railways		423,314,378
Public Works, Miscellaneous		179,609,356
Military Property and Stores		11,749,164
Territorial Accounts		9,895,948
Railway Accounts (old)		88,397,418
Railway Accounts (Loans non-active)		558,371,773
Canadian Government Merchant Marine, Limited		5,979,856
Miscellaneous Investments (non-active)		11,667,443
Balance Consolidated Fund as at, March 31, 1922	$1,082,636,649	
Excess of Revenue over Expenditure, Year ended March 31, 1923	62,292,788	
		$ 1,020,343,861
		2,453,776,869
LIABILITIES—		
Dominion Notes in Circulation		242,657,766
Bank Circulation Redemption Fund		6,454,150
Post Office Account, Money Orders, Postal Notes, etc., outstanding		3,128,772
Savings Bank Deposits		31,791,107
Insurance and Superannuation Funds		20,711,440
Trust Funds		19,621,838
Contingent Funds		2,408,868
Province Accounts		9,624,153
Miscellaneous Current Accounts		421,385
Temporary Loans		95,432,000
Funded Debt		2,452,735,750
Interest Due and Unpaid		3,840,008
		2,888,827,237
Balance Net Debt, March 31, 1923, brought forward		2,453,776,869
NOTE.—The Dominion of Canada is also responsible for principal and interest on loans negotiated by Railways under various Acts of Parliament amounting to $296,036,714. Of this amount $58,167,952 was held by the Minister of Finance in 1923.		
		2,453,776,869

Receipts and Disbursements.—The total receipts on Consolidated Fund Account for the fiscal year ended Mar. 31, 1923, were $394,614,900, an increase of $12,662,513 over the preceding year; besides this, special receipts amounted to $8,479,310—a total of $403,094,210. The regular expenditure on consolidated fund

[1]The net debt on March 31, 1922, was $2,422,135,801. See Table 18, page 778.

account was $332,293,732, but special expenditure amounting to $8,507,691 was also charged to this account. There was also an expenditure on capital account of $9,807,124, while advances to railways were made aggregating $77,865,938—as well as advances to the Canadian Government Merchant Marine aggregating $5,979,856. Thus the total disbursements, inclusive of these advances, amounted to $434,452,341, resulting in an addition of $31,641,067 to the net debt (gross debt less available assets). (See Table **22.**)

Detailed statistics of receipts and expenditures on consolidated fund account are contained in Tables **3** and **4.** Tables **5** and **6** are historical tables giving the figures of the main items of Dominion receipts and expenditure since Confederation, while Table **7** shows the per capita receipts and expenditure for these years according to census and estimated populations.

2.—Receipts and Disbursements, fiscal years ended March 31, 1919-1923.

RECEIPTS.

Items.	1919.	1920.	1921.	1922.	1923.
Consolidated Fund Receipts-	$	$	$	$	$
Customs	147,169,188	168,796,823	163,266,804	105,686,645	118,056,469
Excise	30,342,034	42,698,083	37,118,367	36,755,206	35,761,997
War tax	56,177,508	82,079,802	168,385,327	177,484,161	181,634,875
Post Office	21,603,542	24,471,709	26,706,198	26,402,299	29,016,771
Railways	37,967,551	[1]	[1]	[1]	[1]
Dominion Lands	3,539,927	4,622,592	3,955,326	2,799,450	2,347,715
Interest on investments	7,421,002	17,086,981	24,815,246	21,961,513	16,465,303
Other items	8,725,995	9,990,345	10,139,269	10,863,113	11,331,770
Total Consolidated Fund Receipts	**312,946,747**	**349,746,335**	**434,386,537**	**381,952,387**	**394,614,900**
Special Receipts—					
Miscellaneous Revenue	–	–	1,905,648	319,184	8,479,310[2]
Total Receipts	**312,946,747**	**349,746,335**	**436,292,185**	**382,271,571**	**403,094,210**

[1]Railway Revenue for the fiscal year 1920-23 was transferred and applied against railway working expenses.

[2]Of this amount $8,199,333 was received from the British Government to cover exchange on re-payments made to the Dominion Government in London, July 1920 to August 1921.

DISBURSEMENTS.

Items.	1919.	1920.	1921.	1922.	1923.
Consolidated Fund Expenditure—	$	$	$	$	$
Charges on debt[1]	80,185,604	108,989,747[2]	140,653,607[2]	139,357,449[2]	138,895,803[2]
Subsidies to Provinces	11,327,230	11,490,860	11,490,860	12,211,924	12,207,313
Collection of revenue[3]	73,682,985	41,219,680	43,740,040	49,217,080	47,919,565
Militia and Defence	3,253,876	4,616,782	9,893,863	11,017,533	9,883,986
Pensions	18,282,440	26,004,461	37,420,751	36,153,031	32,985,998
Civil government	7,234,897	7,782,330	8,784,178	9,968,932	10,114,860
Public Works (Income)	6,295,060	9,016,246	10,846,875	10,574,364	9,978,440
Soldiers' Civil Re-establishment	–	45,869,064	35,174,788	17,147,351	12,974,858
Other items[4]	32,469,185	48,854,760	63,113,183	61,913,027	57,332,909
Total ordinary	**232,731,283**	**303,843,930**	**361,118,145**	**347,560,691**	**332,293,732**

[1] Includes charges of management, interest, sinking funds and premium, discount and exchange.

[2] Sinking funds now included in special account.

[3] Includes adulteration of food, culling timber, customs and excise, inspection of staples, weights and measures, gas and electric light, post office, Dominion lands, public works (collection of revenue), railways and canals (collection of revenue).

[4] Includes air board, administration of justice, arts and agriculture, bounties, department of mines, fisheries, government of north west territories, health, immigration, Indians, labour, legislation, lighthouse and coast service, mail subsidies and steamship subventions, marine hospitals, miscellaneous, naval service, ocean and river service, penitentiaries, quarantine, Royal Canadian mounted police, railways and canals (income), scientific institutions, soldiers' land settlement, steamboat inspection, superannuation, trade and commerce, Yukon provisional district.

2.—Receipts and Disbursements, fiscal years ended March 31, 1919-1923—concluded.

DISBURSEMENTS—concluded.

Items.	1919.	1920.	1921.	1922.	1923.
Consolidated Fund Expenditure—concluded.	$	$	$	$	$
Special Disbursements—					
Railway Subsidies	43,805	334,845	–	–	–
War and Demobilization	446,519,440	346,612,955	16,997,544	1,544,250	4,464,760
Other Charges	– 7,283,582	19,995,313	492,048	301,518	4,042,931
Total special	**439,279,663**	**366,943,113**	**17,489,592**	**1,845,768**	**8,507,691**
Total charges Consolidated Fund	**672,010,946**	**670,787,043**	**378,607,737**	**349,406,459**	**340,801,423**
Capital expenditure	25,031,266	69,301,878	40,012,807	16,295,332	9,807,124
Advances to Railways (non-active)	–	45,780,690	109,662,655	97,950,645	77,863,938[5]
Advances to Canadian Government Merchant Marine, Ltd	–	–	–	–	5,979,856
Grand Total Disbursements	**697,042,212**	**785,869,611**	**528,283,199**	**463,652,436**	**434,452,341**

[5] Of this amount $3,065,095 represents discounts and expenses in connection with loan flotations.

3.—Detailed Receipts on Consolidated Fund Account, 1919-1923.

Items.	1919.	1920.	1921.	1922.	1923.
	$	$	$	$	$
Canada Gazette	29,414	50,325	61,468	77,830	82,847
Canals	387,655	441,926	365,941	804,516	742,404
Casual	2,910,190	3,731,725	4,005,183	4,212,862	3,393,429
Chinese Revenue	2,026,669	132,133	240,107	394,932	201,458
Civil Service Examination Fees	11,568	6,394	4,877	2,641	3,514
Cullers' Fees	1,229	1,273	2,070	–	–
Customs	147,169,188	168,796,823	163,266,804	105,686,645	118,056,469
Dominion Lands	3,539,927	4,622,592	3,955,326	2,799,450	2,317,715
Dominion Steamers	13,621	13,181	4,051	269	854
Electric Light Inspection	88,071	115,859	140,474	139,831	134,770
Excise	30,342,034	42,698,083	37,118,367	36,755,207	35,761,997
Fines and Forfeitures	228,815	628,793	501,448	265,153	152,085
Fisheries	123,114	336,591	297,797	224,157	290,623
Gas Inspection	55,701	61,694	70,987	81,720	69,578
Inspection of Staples	1,082,070	1,092,606	1,483,278	1,937,323	2,364,037
Insurance Inspection	64,684	62,384	89,505	95,735	112,833
Interest on Investments	7,421,002	17,086,981	24,815,246	21,961,513	16,465,303
Law Stamps	8,628	7,490	9,423	5,199	13,893
Lighthouse and Coast Service	335	621	612	–	–
Mariners' Fund	69,244	78,227	87,601	131,727	161,010
Militia	35,955	–	–	–	–
Military College	54,428	53,599	70,107	67,315	61,999
Militia Pension Revenue	23,841	47,979	139,385	132,188	121,244
Ordnance Lands	4,819	9,835	8,878	8,438	5,922
Patent Fees	275,709	354,497	407,887	454,886	484,479
Penitentiaries	132,958	130,843	162,710	143,070	134,515
Post Office	21,603,512	24,471,709	26,706,198	26,402,299	29,016,771
Premium, Discount and Exchange	532,849	1,974,072	1,116,581	781,224	1,899,234
Public Works	396,664	479,088	503,053	490,056	486,454
Railways	37,967,551	[1]	[1]	[1]	[1]
Royal N.W.M. Police Officers' Pensions	4,030	5,586	6,469	6,175	5,926
Steamboat Inspection	2,775	4,594	72,704	117,548	126,004
Superannuation Fund	26,069	21,986	22,086	18,511	4,572
War Tax	56,177,508	82,079,801	168,385,327	177,484,161	181,634,875
Weights and Measures	134,890	147,045	264,587	269,806	278,086
Total	**312,946,747**	**349,746,335**	**434,386,537**	**381,952,387**	**394,614,900**

[1] Railway revenue collected in fiscal years 1920-23 was transferred and applied against working expenses.

4.—Detailed Expenditure on Consolidated Fund Account, 1919-1923.

Items.	1919.	1920.	1921.	1922.	1923.
	$	$	$	$	$
Air Board	–	–	1,351,212	1,624,843	1,004,983
Administration of Justice	1,495,688	1,641,122	2,009,240	2,151,956	2,173,404
Adulteration of Food, etc	44,621	44,987	59,860	79,999	111,565
Arts and Agriculture	3,884,929	4,783,083	5,489,384	5,805,900	6,271,816
Bounties	270,802	352,558	149,202	100,140	95,750
Charges of Management	723,336	875,645	992,374	806,926	880,672
Civil Government	7,234,897	7,782,330	8,784,178	9,968,932	10,114,860
Culling Timber	4,625	4,338	3,078	517	400
Customs and Excise	5,426,282	5,955,374	6,615,202	6,657,572	6,535,822
Department of Mines	392,018	566,175	595,261	608,028	614,087
Dominion Lands	2,247,997	4,751,780	3,956,027	4,226,070	4,278,836
Dominion Police	148,489	151,588	[1]	[1]	[1]
Fisheries	1,027,150	1,215,082	1,385,102	1,343,136	1,215,793
Government of N.W. Territories	4,963	3,979	29,146	156,195	221,329
Health	–	–	238,774	255,450	244,104
Immigration	1,112,079	1,388,185	1,688,961	1,636,597	1,987,745
Indians	1,971,172	2,351,969	2,410,073	2,944,037	3,075,064
Inspection of Staples	2,353	2,320	2,598	2,345	2,286
Interest on Public Debt	77,431,432	107,527,089	139,551,520	135,247,849	137,892,735
Labour	166,260	648,713	1,421,969	1,645,540	1,969,877
Legislation	1,766,401	2,617,581	2,343,201	3,870,450	2,600,958
Lighthouse and Coast Service	1,911,247	2,120,005	2,263,118	2,280,766	2,306,485
Mail Subsidies and Steamboat Subventions	1,391,850	1,632,906	1,094,509	1,105,896	1,070,684
Marine Hospitals	74,291	90,112	77,546	91,177	114,727
Militia	3,253,876	4,616,782	9,893,863	11,017,533	9,883,986
Miscellaneous	9,515,936	15,090,383	19,938,768	13,577,625	10,561,669
Naval Service	792,182	1,168,438	3,284,911	3,183,753	2,286,857
Ocean and River Service	1,365,199	1,558,502	2,021,930	1,684,389	1,627,607
Penitentiaries	1,007,586	1,022,330	1,296,352	1,527,451	1,598,831
Pensions	18,282,440	26,004,461	37,420,751	36,153,031	32,985,998
Post Office	19,273,758	20,774,312	22,696,561	28,121,425	27,794,502
Premium, Discount and Exchange	582,340	587,013	109,713	3,302,674	122,396
Public Works, Collection of Revenue	877,472	921,619	1,113,876	1,073,304	1,068,336
Public Works, Income	6,295,060	9,016,246	10,846,875	10,574,364	9,978,440
Quarantine	227,389	222,506	262,498	261,355	225,002
Railways and Canals, Collection of Revenue	45,494,584	8,418,624	8,886,458	8,624,094	7,691,261
Railways and Canals, Income	559,695	1,184,832	2,934,424	5,311,715	7,179,430
Royal C. M. Police	719,143	3,386,389	3,927,799	2,962,442	2,443,286
Scientific Institutions	375,575	464,450	587,892	624,380	664,326
Sinking Funds	1,448,495	[2]	[2]	[2]	[2]
Soldiers' Civil Re-establishment	–	45,869,064	35,174,788	17,147,351	12,974,859
Soldiers' Land Settlement	207,559	2,886,156	3,454,210	2,125,874	1,726,413
Steamboat Inspection	72,874	82,634	97,704	103,670	110,458
Subsidies to Provinces	11,327,236	11,490,860	11,490,860	12,211,924	12,207,313
Superannuation	495,017	517,245	554,510	603,116	884,405
Superannuation No. 3	–	–	80,520	69,246	58,457
Superannuation No. 4	–	–	54,541	435,838	329,602
Trade and Commerce	1,330,449	1,502,712	1,880,943	3,679,146	2,471,831
Weights, Measures, Gas and Electric Light	311,293	346,327	406,380	431,754	436,557
Yukon Territory	183,243	205,124	189,483	142,916	197,930
Total	**232,731,283**	**303,843,930**	**361,118,145**	**347,560,691**	**332,293,732**

[1] Now included with Royal C. M. Police. [2] Now included in special account.

NOTE.—Adulteration of Food, Marine Hospitals and Quarantine, have been classified in the public accounts of 1921, 1922 and 1923 under the heading "Health," but are here deducted, so as not to break the continuity of the table.

5.—Principal Items of Receipts of Canada on Consolidated Fund Account, 1868-1923.

Fiscal years.	Customs taxes.	Excise taxes.	Other taxes.	Total ordinary taxes.	Interest on investments.	Post office and money orders.	Public works.[1]	Total Receipts.
	$	$	$	$	$	$	$	$
1868...	8,578,380	3,002,588	119,713	11,700,681	174,073	525,692	901,466	13,687,928
1869...	8,272,880	2,710,028	129,665	11,112,573	824,424	535,315	918,933	14,379,175
1870...	9,334,213	3,619,633	134,047	13,087,882	383,956	573,566	1,006,845	15,512,226
1871...	11,841,105	4,295,945	183,319	16,320,369	554,384	612,631	1,146,240	19,335,561
1872...	12,787,982	4,735,652	191,918	17,715,552	488,042	692,375	1,211,729	20,714,814
1873...	12,954,164	4,460,682	201,709	17,616,555	396,404	833,657	1,316,636	20,813,469
1874...	14,325,193	5,594,904	209,088	20,129,185	610,863	1,139,973	1,509,915	24,205,093
1875...	15,351,012	5,069,687	244,180	20,664,879	846,887	1,155,332	1,432,360	24,648,715
1876...	12,823,838	5,563,487	227,090	18,614,415	798,906	1,102,540	1,479,232	22,587,587
1877...	12,546,988	4,941,898	209,039	17,697,925	717,684	1,114,946	1,917,455	22,059,274
1878...	12,782,824	4,858,672	200,442	17,841,938	791,758	1,207,790	2,034,484	22,375,011
1879...	12,900,659	5,390,763	185,191	18,476,613	592,500	1,172,418	1,863,149	22,517,382
1880...	14,071,343	4,232,428	175,806	18,479,577	834,793	1,252,498	2,167,401	23,307,407
1881...	18,406,092	5,343,022	193,025	23,942,139	751,513	1,352,110	2,759,591	29,635,298
1882...	21,581,570	5,884,860	82,617	27,549,047	914,009	1,587,888	2,711,134	33,383,456
1883...	23,009,582	6,260,117	–	29,269,699	1,001,193	1,800,391	3,101,138	35,794,650
1884...	20,023,890	5,459,309	–	25,483,199	986,698	1,755,674	3,055,792	31,861,962
1885...	18,935,428	6,449,101	–	25,384,529	1,997,035	1,841,372	3,065,503	32,797,001
1886...	19,362,308	5,852,905	11,243	25,226,456	2,299,079	1,901,690	3,082,411	33,177,040
1887...	22,373,951	6,308,201	4,850	28,687,002	990,887	2,020,624	3,270,782	35,754,993
1888...	22,091,682	6,071,487	14,244	28,177,413	932,025	2,379,242	3,556,101	35,908,464
1889...	23,699,413	6,886,739	27,371	30,613,523	1,305,392	2,220,504	3,642,557	38,782,870
1890...	23,913,546	7,618,118	55,408	31,587,072	1,082,271	2,357,389	3,800,110	39,879,925
1891...	23,305,218	6,914,850	94,083	30,314,151	1,077,228	2,515,823	3,685,530	38,579,311
1892...	20,361,382	7,945,098	139,677	28,446,157	1,086,420	2,652,746	3,575,168	36,921,872
1893...	20,910,662	8,367,364	43,341	29,321,367	1,150,167	2,773,508	3,761,474	38,168,609
1894...	19,119,030	8,381,089	79,084	27,579,203	1,217,809	2,809,341	3,702,746	36,374,693
1895...	17,585,741	7,805,733	54,725	25,446,199	1,336,047	2,792,790	3,591,689	33,978,129
1896...	19,766,741	7,926,006	66,538	27,759,285	1,370,001	2,964,014	3,594,264	36,618,591
1897...	19,386,278	9,170,379	91,969	28,648,626	1,443,004	3,202,938	3,587,166	37,829,778
1898...	21,622,789	7,871,563	82,104	29,576,456	1,513,455	3,527,810	3,873,464	40,555,238
1899...	25,150,745	9,641,227	166,097	34,958,069	1,590,448	3,193,778	4,433,934	46,741,249
1900...	28,219,458	9,868,075	154,690	38,242,223	1,683,051	3,205,535	5,232,459	51,029,994
1901...	28,293,930	10,318,266	131,354	38,743,556	1,784,834	3,441,505	5,770,071	52,514,701
1902...	21,916,394	11,197,134	275,584	43,389,112	1,892,224	3,918,416	6,447,982	58,050,790
1903...	36,738,633	12,613,779	263,694	49,015,506	2,620,953	4,297,833	7,088,502	66,037,069
1904...	40,461,591	12,958,708	241,020	53,661,319	2,236,256	4,652,325	6,972,219	70,669,817
1905...	41,437,569	12,586,475	–3,920	54,020,124	2,105,031	5,125,373	7,395,377	71,182,773
1906...	46,053,377	14,016,220	11,221	60,074,818	2,110,312	5,933,343	8,310,267	80,139,360
1907[2]...	39,717,079	11,805,413	43,094	51,565,586	1,235,746	5,061,728	6,839,586	67,969,328
1908...	57,200,276	15,782,152	343,535	73,325,963	1,925,569	7,107,887	9,973,553	96,054,506
1909...	47,088,444	14,937,768	326,881	62,353,093	2,256,643	7,401,624	9,362,272	85,093,404
1910...	59,767,681	15,253,353	388,453	75,409,487	2,807,465	7,958,548	10,114,990	101,503,711
1911...	71,838,089	16,869,837	1,127,306	89,835,232	1,668,773	9,146,952	10,818,834	117,780,409
1912...	85,051,872	19,261,662	1,534,270	105,847,804	1,281,317	10,492,394	11,651,947	136,108,217
1913...	111,764,699	21,447,445	1,790,214	135,002,358	1,430,511	12,051,729	13,158,078	168,689,903
1914...	104,691,238	21,452,037	1,334,792	127,478,067	1,964,541	12,954,530	14,197,053	163,174,395
1915...	75,941,220	21,479,731	294,490	97,715,441	2,980,247	13,046,665	12,953,487	133,073,482
1916...	98,649,409	22,428,492	–31,714	121,046,187	3,358,210	18,858,690	19,286,418	172,147,838
1917...	134,043,842	24,412,348	86,925	158,543,115	3,094,012	20,902,384	24,440,840	232,701,294
1918...	144,172,630	27,168,445	208,966	171,550,041	4,466,724	21,345,394	27,971,098	260,778,953
1919...	147,169,188	30,342,034	2,026,669	179,537,891	7,421,002	21,603,512	38,751,870	312,946,747
1920...	168,796,823	42,698,083	132,133	211,627,039	17,086,981	24,471,709	921,015[3]	349,746,335
1921...	163,266,804	37,118,367	240,107	200,625,278	24,815,246	26,706,198	868,994[3]	434,386,537[4]
1922...	105,686,645	36,755,207	394,932	142,836,784	21,961,513	26,402,299	1,294,572[3]	381,952,387[4]
1923...	118,056,469	35,761,997	201,458	154,019,924	16,465,303	29,016,771	1,228,858[3]	394,614,900[4]

NOTE.—Receipts from War Taxes 1915-23, are as follows:—1915, $98,057: 1916, $3,620,782: 1917, $16,302,238: 1918, $25,379,901: 1919, $56,177,508: 1920, $82,079,801: 1921, $168,385,327: 1922, $177,484,161: 1923, $181,634,875.

[1]Including railways and canals. [2]Nine months. [3]Exclusive of railways.

[4]Exclusive of special receipts of $1,905,648 in 1921, $319,184 in 1922 and $8,479,310 in 1923. Of this latter amount, $8,199,333 was received from the British Government on exchange account. See note 2, to table 2 of this section.

6.—Principal Items of Dominion Expenditure, 1868-1923.

Fiscal years.	Consolidated Fund. Interest on debt.	Charges of management, premium, discount and exchange.	Pensions.	Public works.	Railways and canals[2].	Subsidies to provinces.	Post Office.	Total Expenditure chargeable to Consolidated Fund.
	$	$	$	$	$	$	$	$
1868...	4,501,568	359,190	56,422	126,270	581,563	2,753,966	616,802	13,486,093
1869...	4,907,014	465,657	50,564	65,015	641,814	2,604,050	787,886	14,038,084
1870...	5,647,054	339,999	53,586	120,031	743,070	2,588,605	808,623	14,345,510
1871...	5,165,304	126,655	52,611	597,275	752,772	2,624,940	815,471	15,623,082
1872...	5,257,231	346,413	62,251	839,786	913,236	2,930,113	929,609	17,589,469
1873...	5,209,266	178,644	49,204	1,297,999	1,378,164	2,921,400	1,067,866	19,174,648
1874...	5,724,436	264,685	56,454	1,778,916	2,260,820	3,752,757	1,387,270	23,316,317
1875...	6,590,790	227,201	63,657	1,756,010	1,981,893	3,750,962	1,520,861	23,713,071
1876...	6,400,902	208,149	110,201	1,948,242	1,897,283	3,690,355	1,622,827	24,488,372
1877...	6,797,297	207,875	112,531	1,262,823	2,239,346	3,655,851	1,705,312	23,519,302
1878...	7,048,884	192,087	105,842	997,470	2,374,314	3,472,808	1,724,939	23,503,158
1879...	7,194,734	277,923	107,795	1,013,023	2,570,361	3,442,764	1,784,424	24,455,382
1880...	7,773,869	289,085	102,889	1,046,342	2,226,456	3,430,846	1,818,271	24,850,634
1881...	7,594,145	225,444	96,389	1,108,815	2,603,717	3,455,518	1,876,658	25,502,554
1882...	7,740,804	195,044	101,197	1,342,000	2,755,833	3,530,999	1,980,567	27,067,104
1883...	7,668,552	234,170	98,446	1,765,256	3,117,465	3,606,673	2,176,089	28,730,157
1884...	7,700,181	229,906	95,543	2,908,852	3,122,103	3,603,714	2,312,965	31,107,706
1885...	9,419,482	387,495	89,879	2,302,363	3,268,222	3,959,327	2,488,315	35,037,060
1886...	10,137,009	346,921	88,319	2,046,552	3,339,670	4,182,526	2,763,186	39,011,612
1887...	9,682,929	287,742	102,109	2,133,316	3,673,894	4,169,341	2,818,907	35,657,680
1888...	9,823,313	343,592	120,334	2,162,116	4,160,332	4,188,514	2,889,729	36,718,495
1889...	10,148,932	273,590	116,030	2,299,231	4,095,301	4,051,428	2,982,321	36,917,835
1890...	9,656,841	230,409	107,391	1,972,501	4,362,200	3,904,922	3,074,470	35,994,031
1891...	9,584,137	262,068	103,850	1,937,546	4,505,516	3,903,757	3,161,676	36,343,568
1892...	9,763,978	183,938	92,457	1,627,851	4,337,877	3,935,914	3,316,120	36,765,894
1893...	9,806,888	213,794	90,309	1,927,832	3,848,404	3,935,765	3,421,203	36,814,053
1894...	10,212,596	180,975	86,927	2,033,955	3,760,550	4,206,655	3,517,261	37,585,025
1895...	10,466,294	278,950	84,349	1,742,317	3,704,126	4,250,675	3,593,647	38,132,005
1896...	10,502,430	248,575	86,080	1,299,769	3,826,226	4,235,664	3,665,011	36,949,142
1897...	10,645,663	315,314	90,882	1,463,719	3,725,690	4,238,059	3,789,478	38,349,760
1898...	10,516,758	199,887	96,187	1,701,313	4,049,275	4,237,372	3,575,412	38,832,526
1899...	10,855,112	173,257	96,129	1,902,664	4,246,404	4,250,636	3,603,799	41,903,500
1900...	10,699,645	227,194	93,453	2,289,889	5,244,301	4,250,608	3,758,015	42,975,279
1901...	10,807,955	201,861	93,551	3,386,632	6,377,961	4,250,607	3,931,446	46,866,368
1902...	10,975,935	263,250	83,305	4,221,294	6,508,477	4,402,098	4,023,637	50,759,392
1903...	11,068,139	294,968	87,925	4,065,553	7,221,705	4,402,503	4,105,178	51,691,903
1904...	11,128,637	588,984	113,495	4,607,330	8,397,434	4,402,292	4,347,541	55,612,833
1905...	10,630,115	276,072	140,424	6,765,446	9,803,912	4,516,038	4,634,528	63,319,683
1906...	10,814,697	346,902	179,023	7,484,716	8,779,678	6,726,373	4,921,577	67,240,641
1907[1]...	6,712,771	244,548	125,832	5,550,571	7,011,858	6,745,134	3,979,557	51,542,161
1908...	10,973,597	383,820	187,557	8,721,327	10,586,114	9,032,775	6,005,930	76,641,452
1909...	11,604,584	356,707	191,533	12,300,184	10,780,126	9,117,143	6,592,386	84,064,232
1910...	13,098,160	358,973	216,697	7,261,218	10,215,038	9,361,388	7,215,338	79,411,747
1911...	12,535,851	376,777	240,586	8,621,431	11,123,251	9,092,472	7,954,223	87,774,198
1912...	12,259,397	455,011	245,045	10,341,487	12,330,463	10,281,045	9,172,036	98,161,441
1913...	12,605,882	502,988	283,188	13,468,505	13,766,180	13,211,800	10,882,804	112,059,537
1914...	12,893,505	487,184	311,900	19,007,513	14,935,138	11,280,469	12,822,058	127,384,473
1915...	15,736,743	554,729	358,558	19,343,532	13,876,066	11,451,673	15,961,191	135,523,207
1916...	21,121,585	731,836	671,133	12,039,252	20,777,830	11,451,673	16,009,139	130,350,727
1917...	35,802,567	496,387	2,814,546	8,633,096	27,124,004	11,469,148	16,300,579	148,599,343
1918...	47,845,585	488,712	8,155,691	7,432,901	34,849,608	11,369,148	18,046,558	178,284,313
1919...	77,431,432	1,305,676	18,282,440	6,295,060	45,494,584	11,327,236	19,273,758	232,731,283
1920...	107,527,089	1,462,658	26,004,461	9,016,246	8,418,624	11,490,860	20,774,312	303,843,930
1921...	139,551,520	1,102,088	37,420,751	10,846,875	8,886,458	11,490,860	22,696,561	361,118,145
1922...	135,247,849	4,109,601	36,153,031	10,574,364	8,624,094	12,211,924	28,121,425	347,560,691
1923...	137,892,735	1,003,068	32,985,998	9,978,440	7,691,261	12,207,313	27,794,502	332,293,732

[1]Nine months. [2]Expenditure (Collection of Revenue).

NOTE.—From 1868 to 1906, inclusive, the fiscal years ended on June 30, and from that date to 1923, on March 31.

6.—Principal Items of Dominion

Years.	Capital Expenditure.								
	Canals.	Canadian Pacific Railway.	Debts allowed to provinces.	Dominion Lands.	Intercolonial and connected Railways, miscellaneous.	Public Works.	Hudson Bay Railway.	National Transcontinental Railway including Quebec Bridge.	Prince Edward Island Railway.
	$	$	$	$	$	$	$	$	$
1868	51,498	–	–	–	455,250	41,690	–	–	–
1869	130,142	–	–	–	282,615	8,548	–	–	–
1870	–	–	–	–	1,693,229	–	–	–	–
1871	–	30,148	–	–	2,866,376	–	–	–	–
1872	255,646	489,428	1,666,200	–	5,131,141	68,746	–	–	–
1873	256,547	561,818	13,859,080	–	5,019,240	99,517	–	–	–
1874	1,189,592	310,225	4,927,061	–	3,614,899	135,963	–	–	–
1875	1,714,830	1,546,242	–	–	3,426,100	189,484	–	–	46,087
1876	2,388,733	3,346,567	–	–	1,108,322	267,840	–	–	42,546
1877	4,131,375	1,691,150	–	–	1,318,352	258,833	–	–	200,000
1878	3,843,339	2,228,373	–	–	408,817	170,120	–	–	6,551
1879	3,064,099	2,240,286	–	–	226,639	77,179	–	–	40,129
1880	2,123,366	4,044,523	–	–	2,048,015	8,730	–	–	16,540
1881	2,077,029	4,968,504	–	334,681	608,733	187,370	–	–	–
1882	1,647,759	4,589,076	–	511,882	585,569	70,949	–	–	402
1883	1,763,002	10,033,800	–	556,870	1,616,633	119,869	–	–	57,186
1884	1,577,295	11,192,722	7,172,298	723,658	2,689,690	491,376	–	–	130,663
1885	1,504,621	9,900,282	5,420	303,593	1,247,006	182,306	–	–	76,957
1886	1,333,325	3,672,585	3,113,334	130,653	765,967	569,202	–	–	4,668
1887	1 783,698	915,057	–	162,392	926,030	353,044	–	–	5,800
1888	1,033,118	52,099	–	135,048	1,713,487	963,778	–	–	–
1889	972,918	86,716	–	130,684	2,623,137	575,408	–	–	–
1890	1,026,364	40,981	–	133,832	2,351,787	3,220,926	–	–	–
1891	1,280,725	37,367	–	94,847	1,184,318	515,702	–	–	–
1892	1,463,279	66,212	–	86,735	316,784	224,390	–	–	8,300
1893	2,069,573	413,837	–	115,038	299,081	181,878	–	–	–
1894	3,02?,164	146,540	–	149,147	439,209	102,059	–	–	–
1895	2,452,274	49,209	–	99,842	327,605	102,393	–	–	–
1896	2,258,779	65,669	–	82,184	260,396	114,826	–	–	–
1897	2,348,637	14,054	–	91,412	190,570	129,238	–	–	–
1898	3,207,250	692	–	127,505	252,756	364,018	–	–	17,542
1899	3,899,877	8,419	267,026	151,213	1,081,930	385,094	–	–	22,000
1900	2,639,565	236	–	199,470	3,255,348	1,089,827	–	–	53,546
1901	2,360,570	8,979	–	269,061	3,633,837	1,006,983	–	–	280,174
1902	2,114,690	449	–	370,838	4,626,841	2,190,125	–	–	475,998
1903	1,823,274	–	–	449,542	2,254,267	1,268,004	–	–	829,414
1904	1,880,787	33,076	–	748,855	1,879,566	1,334,397	–	6,249	698,878
1905	2,071,594	–	–	794,410	4,755,578[2]	1,642,042	–	778,491	591,413
1906	1,552,121	–	–	599,780	3,765,171	2,359,528	–	1,841,270	496,125
1907[6]	887,839	–	–	526,583	1,512,491[3]	1,797,871	–	537,867	91,210
1908	1,723,156	600	–	768,244	4,369,738	2,969,049	–	18,910,253	390,962
1909	1,873,868	938	–	797,747	3,874,480	2,832,295	92,428	31,317,132	561,207
1910	1,650,707	–	–	785,157	1,278,409	4,514,606	53,043	19,868,064	206,397
1911	2,349,475	2,918	–	– 5,508	763,833	3,742,717	184,150	23,715,549	94,321
1912	2,560,938	–	–	–	1,710,449	4,116,385	159,632	22,264,130	128,042
1913	2,259,642	–	–	–	2,406,988[4]	6,057,515	1,099,063	15,279,837	103,001
1914	2,829,661	–	–	–	4,348,000	10,100,017	4,498,717	15,274,206	129,575
1915	5,490,796	–	–	–	6,914,977	11,049,030	4,773,744	12,648,242	570,531
1916	6,170,953	–	–	–	7,861,899	8,471,229	4,887,131	9,825,265	1,350,473
1917	4,304,589	–	–	–	4,873,032	7,838,116	2,604,280	6,650,263	609,752
1918	1,781,957	–	–	–	–	6,347,201	1,879,699	103,167	–
1919	2,211,964	–	–	–	–	5,705,348	562,558	1,723,638	–
1920	4,550,761	–	–	–	3,285,736	38,869,683	235,608	527,480	3,540[5]
1921	5,450,006	–	–	–	731,018	27,559,809	30,036	20,164	–
1922	4,482,610	–	–	–	9,649	10,431,699	34,770	–	97,000
1923	4,995,184	–	–	–	59,950	3,411,510	27,803	–	–

[1]Including $2,725,504 for the improvement of the St. Lawrence, spent during the previous years by Montreal Harbour Commission.
[2]Including $17,956 cost of new car for the Governor General.
[3]Including $38,583 cost of new car for the Governor General.
[4]Including $15,000 cost of new car for the Governor General.
[5]Includes New Brunswick Railway.
[6]Nine months.

Expenditure, 1868-1923—concluded.

North-west Territories.	Militia.	Canadian Government Railways.	Total Capital Expenditure.	Other Disbursements.			Total Disbursements.	Years.
				Railway Subsidies.	War and Demobilization.	Other Charges.		
$	$	$	$	$	$	$	$	
–	–	–	548,438	–	–	37,158	14,071,689	1868
19,113	–	–	440,418	–	–	429,663	14,908,166	1869
1,821,887	–	–	3,515,116	–	–	155,988	18,016,614	1870
773,872	–	–	3,670,396	–	–	–	19,293,478	1871
241,889	–	–	7,853,050	–	–	223,456	25,665,975	1872
63,239	–	–	19,859,441	–	–	5,719	39,039,808	1873
–	–	–	10,177,740	–	–	4,019	33,498,076	1874
–	–	–	6,922,743	–	–	2,253,097	32,888,911	1875
–	–	–	7,154,008	–	–	315,764	31,958,144	1876
–	–	–	7,599,710	–	–	1,388,984	32,507,996	1877
–	–	–	6,657,200	–	–	385,413	30,545,772	1878
–	–	–	5,648,332	–	–	676,225	30,779,939	1879
–	–	–	8,241,174	–	–	949,948	34,041,756	1880
–	–	–	8,176,317	–	–	117,772	33,796,643	1881
–	–	–	7,405,637	–	–	201,885	34,674,625	1882
–	–	–	14,147,360	–	–	21,369	42,898,886	1883
–	–	–	23,977,702	208,000	–	2,567,453	57,866,862	1884
–	–	–	13,220,185	403,245	–	502,587	49,163,078	1885
–	–	–	9,589,734	2,701,249	–	10,534,973	61,837,569	1886
293,918	–	–	4,439,939	1,406,533	–	–	41,504,152	1887
539,930	–	–	4,437,460	1,027,042	–	155,623	45,064,124	1888
31,448	–	–	4,420,313	846,722	–	1,333,328	43,518,198	1889
4,773	–		6,778,663[1]	1,678,196	–	44,947	41,770,333	1890
2,901	–	–	3,115,860	1,265,706	–	68,074	40,793,208	1891
−1,243	–	–	2,164,457	1,248,216	–	2,093,569	42,272,136	1892
8,911	–	–	3,088,318	811,394	–	139,963	40,853,728	1893
−1,149	–	–	3,862,970	1,229,885	–	330,354	43,008,234	1894
−833	–	–	3,030,490	1,310,549	–	399,294	42,872,338	1895
−543	1,000,000	–	3,781,311	3,228,746	–	137,185	44,096,384	1896
3,284	745,965	–	3,523,160	416,955	–	682,881	42,972,756	1897
−1,272	173,740	–	4,142,231	1,414,935	–	944,589	45,334,281	1898
−1,853	387,810	–	6,201,516	3,201,220	–	236,399	51,542,635	1899
−1,473	230,851	–	7,467,370	725,720	–	1,549,098	52,717,467	1900
−1,632	135,885	–	7,693,857	2,512,329	–	900,312	57,982,866	1901
−1,543	299,697	–	10,077,095	2,093,939	–	1,040,374	63,970,800	1902
−3,040	428,223	–	7,049,684	1,463,222	–	1,541,763	61,746,572	1903
−2,616	1,299,910	–	7,879,102	2,046,878	–	6,716,235	72,255,048	1904
−2,478	1,299,964	–	11,931,014	1,275,630	–	2,277,812	78,804,139	1905
−1,767	1,299,876	–	11,912,104	1,637,574	–	2,487,323	83,277,642	1906
−1,352	975,283	–	11,327,792	1,324,889	–	1,583,297	65,778,139	1907
−911	1,297,905	–	30,428,996	2,037,629	–	3,470,603	112,578,680	1908
−1,045	1,243,072	–	42,592,122	1,785,887	–	4,999,283	133,441,524	1909
−650	1,299,970	–	29,655,703	2,048,097	–	4,280,227	115,395,774	1910
−33,688	–	–	30,813,767	1,284,892	–	2,988,393	122,861,250	1911
–	–	–	30,939,576	859,400	–	7,181,665	137,142,082	1912
–	–	–	27,206,046	4,935,507	–	255,787	144,456,878	1913
–	–	–	37,180,176	19,036,237	–	2,640,162	186,241,048	1914
–	–	–	41,447,320	5,191,507	60,750,476	5,186,016	248,098,526	1915
–	–	–	38,566,950	1,400,171	166,197,755	3,186,898	339,702,502	1916
–	–	–	26,880,032	959,584	306,488,815	15,275,345	498,203,118	1917
–	–	32,999,880	43,111,904	720,405	343,836,802	10,706,787	576,660,210	1918
–	–	14,827,758	25,031,266	43,805	446,519,440	−7,283,582	697,042,212	1919
–	–	22,307,366	69,301,878	334,845	346,612,955	19,995,313	785,869,611[2]	1920
–	–	6,221,774	40,012,807	–	16,997,544	492,048	528,283,199[2]	1921
–	–	1,239,605	16,295,333	–	1,544,250	301,518	463,652,436[2]	1922
–	–	1,313,022	9,807,124	–	4,464,760	4,042,931	434,452,341[2]	1923

[1]Includes Advances to Railways (non-active) amounting to $45,780,690 in 1920, $109,662,655 in 1921, $97,950,645 in 1922 and $77,863,938 in 1923, together with advances of $5,979,856 to the Canadian Government Merchant Marine, Ltd., in 1923.

7.—Population and Revenue and Expenditure per head, 1868-1923.

Years.	Population.	Revenue per head.	Expenditure per head.	Years.	Population.	Revenue per head.	Expenditure per head.
	No.	$ cts.	$ cts.		No.	$ cts.	$ cts.
1868	3,372,000	4.05	4.00	1895	5,034,000	6.75	7.58
1869	3,413,000	4.21	4.11	1896	5,086,000	7.20	7.26
1870	3,454,000	4.29	4.15	1897	5,142,000	7.36	7.46
1871*	3,485,761	5.55	4.48	1898	5,199,000	7.80	7.47
1871	3,518,000	5.50	4.44	1899	5,259,000	8.89	7.97
1872	3,611,000	5.74	4.87	1900	5,322,000	9.59	8.07
1873	3,668,000	5.67	5.23	1901*	5,371,315	9.78	8.72
1874	3,825,000	6.33	6.10	1901	5,403,000	9.72	8.67
1875	3,887,000	6.34	6.10	1902	5,532,000	10.49	9.18
1876	3,949,000	5.70	6.20	1903	5,673,000	11.64	9.11
1877	4,013,000	5.50	5.86	1904	5,825,000	12.13	9.55
1878	4,079,000	5.49	5.76	1905	5,992,000	11.88	10.57
1879	4,146,000	5.43	5.90	1906	6,171,000	12.99	10.90
1880	4,215,000	5.53	5.90	1907	6,302,000	10.71	8.18
1881*	4,324,810	6.85	5.90	1908	6,491,000	14.80	11.81
1881	4,337,000	6.83	5.88	1909	6,695,000	12.71	12.56
1882	4,384,000	7.62	6.18	1910	6,917,000	14.67	11.48
1883	4,433,000	8.08	6.48	1911*	7,206,643	16.34	12.18
1884	4,485,000	7.11	6.94	1912	7,365,205	18.48	13.33
1885	4,539,000	7.23	7.72	1913	7,527,208	22.41	14.89
1886	4,589,000	7.23	8.50	1914	7,692,832	21.21	16.56
1887	4,638,000	7.71	7.69	1915	7,862,078	16.93	17.24
1888	4,688,000	7.66	7.84	1916	8,035,584	21.42	16.22
1889	4,740,000	8.19	7.79	1917	8,180,160	28.45	18.17
1890	4,793,000	8.33	7.52	1918	8,328,382	31.31	21.41
1891*	4,833,239	7.98	7.52	1919	8,478,546	36.91	27.45
1891	4,844,000	7.96	7.50	1920	8,631,475	40.52	35.20
1892	4,889,000	7.55	7.52	1921*	8,788,483	49.43	41.09
1893	4,936,000	7.73	7.46	1922	8,966,834	42.60	38.76
1894	4,894,000	7.29	7.54	1923	9,146,457	43.15	36.33

NOTE.—The years marked with an asterisk (*) are those of the Census, April 2, 1871, April 4, 1881, April 6, 1891, April 1, 1901, June 1, 1911 and 1921. In all other cases down to 1910 the population is estimated at the close of each fiscal year; June 30 from 1868 to 1906, and March 31 from 1907 to 1910. For the inter-censal years 1912 to 1920, and also for 1922 and 1923, the population is estimated as at June 1. The fiscal period of 1907 is for the nine months ended March 31.

War Tax Revenue.

In Tables **8**, **9**, and **10** are given statistics of revenue collected by war taxes for the fiscal year 1923 and previous years; in Table 8 by sources for the years 1915 to 1923, in Table 9 by collections of the Customs and Excise Department for the last two fiscal years, and in Table **10** by Income and Business Profits War Taxes for the fiscal years 1922 and 1923.

8.—War Tax Revenue during the fiscal years ended March 31, 1915-1923.

Years.	Banks.	Trust and Loan Companies.	Insurance Companies.	Business Profits.	Income Tax.	Customs and Excise Department.[1]	Total War Tax Revenue.
	$	$	$	$	$	$	$
1915	–	–	–	–	–	98,057	98,057
1916	1,300,447	324,250	459,247	–	–	1,536,838	3,620,782
1917	1,114,023	202,415	419,699	12,506,517	–	2,059,584	16,302,238
1918	1,115,758	269,129	496,540	21,271,084	–	2,227,390	25,379,901
1919	1,099,764	323,340	546,114	32,970,062	9,349,720	11,888,508	56,177,508
1920	1,170,223	274,216	638,731	44,145,184	20,263,740	15,587,707	82,079,801
1921	1,257,534	293,802	807,667	40,841,401	46,381,824	78,803,099	168,385,327
1922	1,293,697	283,994	749,959	22,815,667	78,684,355	73,656,489	177,484,161
1923	1,244,437	312,392	852,328	13,031,462	59,711,538	106,482,718	181,634,875
Total	**9,595,883**	**2,283,538**	**4,970,285**	**187,581,377**	**214,391,177**	**292,340,390**	**711,162,650**

[1] Amounts paid in to Receiver-General.

9.—War Tax Revenue collected by the Customs and Excise Department, by Provinces, during the fiscal years ended March 31, 1922 and 1923.

(Accrued Revenue).

1922.

Provinces.	Stamps.	Licenses.	Automobiles.	Musical Instruments.	Jewelry.	Wines.	Whiskey.
	$	$	$	$	$	$	$
Prince Edward Island	7,572	1,172	–	9	–	–	–
Nova Scotia	65,994	7,383	–	2,082	706	–	2,847
New Brunswick	56,052	3,770	–	–	589	–	2,697
Quebec	557,191	31,434	–	49	11,434	7,832	286,697
Ontario	870,313	55,141	57,847	10,691	80,124	113,174	398,441
Manitoba	204,372	5,586	–	7	3,837	1,811	10,927
Saskatchewan	118,654	2,203	2,117	–	2,819	–	–
Alberta	128,826	3,219	–	–	996	–	2,518
British Columbia	133,736	9,088	–	137	7,642	157	4,417
Yukon	395	122	–	–	–	–	–
Totals	**2,143,105**	**119,118**	**59,964**	**12,975**	**108,147**	**122,974**	**708,544**

Provinces.	Sales.	Ale and Beer.	Matches.	Playing Cards.	Confectionery.	Totals.
	$	$	$	$	$	$
Prince Edward Island	61,480	–	–	–	99	70,332
Nova Scotia	877,206	1,652	–	–	36,620	994,489
New Brunswick	759,304	3,750	–	–	19,567	845,730
Quebec	14,101,680	855,511	1,821,629	50,483	49,399	17,773,339
Ontario	23,016,539	192,674	869,166	180,545	193,637	26,038,290
Manitoba	2,292,067	15,336	–	–	20,123	2,554,067
Saskatchewan	687,144	187	–	–	2,685	815,810
Alberta	967,912	21,268	–	43	10,926	1,135,708
British Columbia	2,055,981	156,145	3,288	–	17,466	2,388,057
Yukon	849	–	31	–	2	1,399
Totals	**44,820,162**	**1,246,523**	**2,694,114**	**231,071**	**350,524**	**52,617,221**

Importations—Sales	$ 16,698,589
Excise	1,212,355
Transportation	2,534,170
Embossed cheques	840,279
Grand Total Excise Revenue[1]	73,902,614

1923.

Provinces.	Licenses.	Stamps.	Matches.	Automobiles.	Sales.	Confectionery.
	$	$	$	$	$	$
Prince Edward Island	404	15,019	–	1,169	71,543	70
Nova Scotia	2,803	137,489	–	6,632	1,102,233	53,214
New Brunswick	2,102	109,559	–	35,816	1,027,659	36,344
Quebec	17,675	1,352,717	1,914,077	68,617	19,404,620	66,800
Ontario	32,866	2,094,875	762,770	1,089,936	32,646,710	222,650
Manitoba	3,680	515,826	–	36,686	3,244,963	32,700
Saskatchewan	1,473	218,455	–	54,401	873,966	1,241
Alberta	2,575	256,164	–	29,189	1,377,557	11,835
British Columbia	4,794	316,732	–	40,104	2,933,911	17,417
Yukon	48	1,613	–	48	2,358	–
Totals, 1923	**68,420**	**5,018,449**	**2,676,847**	**1,362,597**	**62,685,520**	**442,271**

[1] Includes $1,932 from British Post Office parcels.

9.—War Tax Revenue collected by the Customs and Excise Department, by Provinces, during the fiscal years ended March 31, 1922 and 1923—concluded.

(Accrued Revenue).

Provinces.	Playing Cards.	Cigars.	Wines.	Ale and Beer.	Beverages.	
					Schedule I, 5 per cent.	Schedule II, 5c. per gal.
	$	$	$	$	$	$
Prince Edward Island	–	151	–	5,180	1,695	5,094
Nova Scotia	–	331	–	24,507	1,040	7,912
New Brunswick	–	–	–	–	211	1,001
Quebec	47,385	179,184	1,549	2,060,913	3,934	22,510
Ontario	159,242	99,285	156,896	197,640	14,928	184,712
Manitoba	–	217	438	130,360	2,762	78,628
Saskatchewan	–	–	–	14,213	1,349	7,799
Alberta	–	1,161	–	64,324	982	29,817
British Columbia	–	9,195	487	115,326	1,398	6,451
Yukon	–	–	–	–	4	7
Totals, 1923	**206,627**	**289,524**	**159,370**	**2,612,463**	**28,304**	**343,931**

Provinces.	Embossed Cheques.	Domestic Total.	Importations.		Total.
			Sales.	Excise.	
	$	$	$	$	$
Prince Edward Island	138	1,314,629	617,207	17,013	1,948,849
Nova Scotia	1,712	1,246,982	690,380	9,070	1,946,432
New Brunswick	–	89,417	37,103	419	126,939
Quebec	81,506	25,221,487	8,038,513	137,618	33,397,618
Ontario	57,139	37,719,649	14,121,106	508,111	52,348,866
Manitoba	15,945	4,062,204	1,710,589	33,899	5,806,692
Saskatchewan	1,830	1,174,727	423,863	5,486	1,604,076
Alberta	1,391	1,774,995	437,097	12,113	2,224,205
British Columbia	1,940	3,447,757	2,476,121	43,912	5,967,790
Yukon	–	4,078	21,836	359	26,273
British Post Office Parcels	–	–	2,918	3	2,921
Totals, 1923	**161,601**	**76,055,924**	**28,576,735**	**768,002**	**105,400,661**

Embossed Cheques (Departmental)	355,141
Transportation, etc	2,234,091
Grand Total	**107,989,893**

10.—Statement showing Amounts collected under the Income War Tax Act and the Business Profits War Tax Act, by Provinces, for the fiscal years ended March 31, 1922 and 1923.

Provinces.	1922.			1923.		
	Income War Tax.	Business Profits War Tax.	Total.	Income War Tax.	Business Profits War Tax.	Total.
	$	$	$	$	$	$
Prince Edward Island	78,929	–	78,929	88,907	–	88,907
Nova Scotia	2,240,826	292,654	2,533,480	1,585,659	154,101	1,739,760
New Brunswick	1,456,273	371,604	1,827,877	1,023,467	127,144	1,150,611
Quebec	24,613,759	6,654,695	31,268,454	21,107,600	3,579,034	24,686,634
Ontario	35,065,911	12,131,057	47,196,968	24,935,219	6,144,924	31,080,143
Manitoba	6,116,457	1,373,081	7,489,538	4,251,583	913,597	5,165,180
Saskatchewan	2,446,219	218,168	2,664,387	1,520,803	219,563	1,740,366
Alberta	2,454,499	316,554	2,771,054	1,546,320	594,757	2,141,077
British Columbia	5,168,570	1,261,362	6,429,932	3,612,128	1,151,297	4,763,425
Yukon	37,367	–	37,367	39,878	–	39,878
Interest	–	196,491	196,491	–	147,044	147,044
Total	**79,678,810**	**22,815,667**	**102,494,477**	**59,711,564**	**13,031,461**	**72,743,025**
Refunds	994,459	–	994,459	–	–	–
Total	**78,684,351**	**22,815,667**	**101,500,018**	**59,711,564**	**13,031,461**	**72,743,025**

Inland Revenue.

Under the Inland Revenue Act (R.S. 1906, c. 5), the Department of Inland Revenue until 1918 had the control and management of standard weights and measures and of the collection of excise duties, of stamp duties, internal taxes, bridge and ferry tolls and rents. It administered the statutes which dealt with the adulteration of food and other articles, electricity and gas inspection, patent medicines, petroleum, naphtha and the analysis of fertilizers and feeding stuffs. The Department also established the food standards, which were put into force from time to time by Orders in Council under the authority of Section 26 of the Adulteration Act. For the year ended March 31, 1923, the total inland revenue of the Dominion amounted to $144,249,547, as compared with $110,812,503 in 1922. By Order in Council, dated May 18, 1918, the Department of Customs and the Department of Inland Revenue were amalgamated and combined under the name of the Department of Customs and Inland Revenue under one Minister of the Crown. By Order in Council dated June 3, 1918, the administration of the Gas, Electric Light and Weights and Measures Inspection Acts, the Adulteration of Food, Commercial Feeding Stuffs, Fertilizers, Proprietary and Patent Medicine and Inspection of Water Meters Acts was transferred to the Department of Trade and Commerce as from September 1, 1918. On June 4, 1921, the Department of Customs and Inland Revenue was consolidated, under one Minister, as the Department of Customs and Excise (11-12 George V, chap. 26).

Canadian Excise Tariff.—The following is a statement of the Canadian excise tariff, as existing on July 1, 1923:—

Spirits—	
When made from raw grain, per proof gal.	$9.00
When made from malted barley	9.02
When made from imported molasses or other sweetened matter free of Customs duty, per proof gal	9.03
Malt, per lb	0.03
Malt, imported, crushed or ground, per lb	0.05
Malt liquor, when made in whole or part from any other substance than malt, per gal	0.15
Tobacco, per lb	$0.20
Cigarettes, weighing not more than 3 lb. per thousand	6.00
Cigarettes, weighing more than 3 lb. per thousand	11.00
Foreign raw leaf tobacco, unstemmed, per standard lb	0.40
Foreign raw leaf tobacco, stemmed, per standard lb	0.60
Canada twist tobacco, per lb	0.20
Snuff, per lb	0.20
Cigars, per M	3.00
Cigars, when put up in packages of less than 10 each, per M	4.00

When, however, any person is licensed by the Minister of Customs and Excise to manufacture patent and proprietary medicines, extracts, essences and pharmaceutical preparations by the use of spirits in bond, subject to the Inland Revenue Act and regulations thereunder, the following duties of excise shall be collected; when made from raw grain, $2.40 per proof gallon; when made from malted barley, $2.42 per proof gallon; when made from imported molasses or other sweetened matter free of customs duty, $2.43 per proof gallon. Druggists licensed by the Minister of Customs and Excise to prepare prescriptions for medicines and pharmaceutical preparations, are also allowed to use limited quantities of spirits testing not less than 50 p.c. over proof on payment of the above lower manufacturers' rates of duty. A drawback of 99 p.c. of the duty may be granted when spirits testing not less than 50 p.c. over proof are delivered in limited quantities to universities, scientific or research laboratories or hospitals for medicinal purposes only.

In Table **11** are set out the various sources of inland revenue for the years 1918 to 1923, the last fiscal year showing an increase over the previous year of $33,437,044, due to the increased amount collected in 1923 as war taxes. The increase in this item over 1922 was $34,087,279. Tables **12** and **13** show statistics

of excise licenses issued in the fiscal years 1918 to 1923 and of distillation during the last five fiscal years.

11.—Excise and other Inland Revenues for the fiscal years 1918-1923.

Sources of Revenue.	1918.	1919.	1920.	1921.	1922.	1923.
	$	$	$	$	$	$
Acetic acid	7,330	6,795	6,007	1,955	100	100
Cigars	776,086	1,261,915	1,629,254	1,293,655	1,095,170	622,035
Electric light	79,520	[1]	[1]	[1]	[1]	[1]
Malt	1,791,482	1,477,792	2,101,939	2,468,476	2,628,995	2,549,601
Malt liquor	80,486	19,082	76,502	84,301	61,531	60,331
Manufactures in bond	123,183	118,856	124,171	76,508	16,525	18,225
Methylated spirits	398,968	322,583	508,406	405,457	–	–
Ferry licenses	2,013	–	–	–	–	–
Seizures	6,933	42,021	213,167	174,523	–	–
Spirits	11,486,547	6,964,415	8,950,241	5,757,463	6,224,061	7,985,808
Tobacco	12,616,879	20,248,335	29,455,255	27,132,933	26,876,807	25,013,128
War tax, revenue stamps, etc.	2,253,422	11,964,740	15,744,040	79,346,815	73,902,614	107,989,893
Weights and measures, gas and law stamps	204,955	8,628[2]	7,490[2]	9,423[2]	–	–
Other revenues	134,582	70,827	112,064	165,482	6,700	10,426
Totals	**29,962,366**	**42,505,989**	**58,928,536**	**116,916,991**	**110,8.2,503**	**144,249,547**

[1] Administration now under Department of Trade and Commerce. [2] Law Stamps only.

12.—Number of Excise Licenses Issued during the fiscal years 1918-1923.

Description.	1918.	1919.	1920.	1921.	1922.	1923.
Distillers	12	14	12	12	10	11
Brewers and Maltsters	98	81	75	73	79	74
Tobacco manufacturers	71	72	87	85	81	76
Cigar manufacturers	195	165	155	147	152	140
Petroleum refineries	12	11	13	12	14	16
Manufacturers in Bond—						
Vinegar distillers	21	19	19	18	1	–
Perfumes, pharmaceutical preparations, etc	38	32	88	114	–	–
Chemical stills	123	122	129	140	149	163
Wood alcohol manufacturers	12	12	12	12	12	9
Malt vinegar brewers	2	2	3	3	3	3
Malt products	–	–	1	1	–	–
Still manufacturers and importers	3	3	6	4	14	10
Acetic acid manufacturers	3	2	2	2	2	2
Bonded warehouses	180	135	85	49	45	49
Explosives	5	5	2	–	–	–
Rectifiers	2	5	3	1	1	1
Sundries	53	50	90	119	334	354

13.—Statistics of Distillation for the fiscal years 1919-1923.

Schedule.	1919.	1920.	1921.	1922.	1923.
Licenses issued ..... No.	18	14	14	10	12
License fees ..... $	4,375	3,500	3,250	2,500	2,750
Grain, etc., for distillation—					
Malt ..... lb.	996,093	524,832	1,671,298	4,084,925	4,222,031
Indian corn ..... "	15,310,212	7,044,316	18,111,700	33,210,842	12,596,833
Rye ..... "	1,775,935	1,170,162	4,254,150	9,168,125	9,936,928
Oats ..... "	41,900	28,700	133,980	185,260	88,310
Wheat ..... "	1,237,140	482,596	69,740	220,755	–
Total grain distillation ..... "	19,361,280	9,250,606	24,240,868	46,869,907	26,844,102
Molasses ..... "	58,598,950	34,072,251	54,848,675	44,996,266	45,009,101
Proof spirits manufactured ..... gal.	4,187,109	2,356,329	4,194,691	5,050,188	3,828,879
Duty collected ex-manufactory on deficiencies and assessments—					
Gallons	1,860	388	3,551	6,747	204
Amount ..... $	4,464	931	8,536	16,192	1,840
Total duty collected plus license fees. $	8,839	4,431	15,681	18,692	4,590
Vinegar ..... gal.	2,922,886	2,693,779	880,982[1]	–	–
Acetic Acid ..... "	167,383	147,669	46,375	–	–

[1] For April, May and June only. Regulations changed July 20, and duty taken off from that date.

Consumption of Alcohol and Tobacco.—In Tables **14** and **15** are shown the quantities of spirits, malt liquor and tobacco taken out of bond for consumption in the fiscal years 1918 to 1923 and the annual consumption per head of population of spirits, wine, beer and tobacco, together with the duties per head paid on these goods. Until recent years, spirits and tobacco were the most important sources of inland revenue. Owing to the imposition of war taxes, revenues derived from them have fallen from 65 p.c. of the total of inland revenue in 1920 to 23 p.c. of the total in 1923. This is accounted for mainly by the increase in the volume of war taxes collected, but to some extent also by the decrease in the consumption of wine and spirits. The consumption of cigars also fell from 270,089,761 in 1920 to 183,965,151 in 1923, a decline of more than 32 p.c.

14.—Quantities of Spirits, Malt Liquor, Malt and Tobacco taken out of Bond for Consumption in the Fiscal Years 1918-1923.

Items.	1918.	1919.	1920.	1921.	1922.	1923.
Spirits.....gal.	4,591,972	2,941,108	3,816,124	2,816,071	730,474	729,678
Malt liquor..... "	28,442,427	26,024,117	36,863,867	35,509,757	38,404,346	36,789,195
Malt.....lb.	59,626,049	49,184,747	69,975,631	82,210,351	87,561,176	84,922,024
Tobacco, snuff and cigarettes[1]..... "	26,774,298	24,640,853	30,371,961	26,708,764	27,879,419	27,826,031
Cigars.....No.	254,445,945	221,087,110	270,089,761	214,262,197	181,255,533	183,965,151

[1] Tobacco, 21,313,311 lbs.: snuff, 759,398 lbs.: cigarettes, 1,917,773,908 in 1923.

15.—Consumption per head of Spirits, Wine, Beer and Tobacco, and amount of Excise and Customs Duties per head, in the fiscal years 1918-1923.

(From the Report of the Department of Customs and Excise).

Items.	1918.	1919.	1920.	1921.	1922	1923.
Consumption of—						
Spirits.....gal.	0·699	0·391	0·624	0·857	0·360	0·219
Wine..... "	0·061	0·025	0·078	0·077	0·037	0·037
Beer..... "	3·414	2·948	4·100	3·954	4·375	4·028
Tobacco.....lb.	3·612	3·109	3·745	3·272	3·434	3·243
Duty paid on—						
Spirits..... $	1·810	0·942	1·586	2·256	1·859	2·006
Wine..... $	0·036	0·015	0·056	0·074	0·049	0·057
Beer..... $	0·228	0·170	0·243	0·292	0·308	0·287
Tobacco..... $	1·698	2·520	3·541	3·245	3·254	2·883

Provincial Subsidies.

Tables **16** and **17** show the aggregate amounts of the subsidies and other payments made by the Dominion to the Provincial Governments for each of the years 1919 to 1923 (Table **16**), and the totals paid from Confederation to date (Table **17**). The Provincial subsidies payable by the Dominion Government were originally settled by the British North America Act, 1867 (30 and 31 Vict., c. 3, s. 118), but were revised by the British North America Act, 1907 (7 Edw. VII, c. 11). Under the revised settlement each Provincial Government receives (*a*) a fixed grant according to population and (*b*) a grant at the rate of 80 cents per head of the population up to 2,500,000, and at the rate of 60 cents per head of so much of the population as exceeds that number. The Province of British Columbia received an additional grant of $100,000 per annum for a period of 10 years from 1907.[1] An additional grant of $100,000 per annum is payable to Prince Edward Island under an Act of 1912 (2 Geo. V, c. 42), and the payments to Manitoba were revised

[1] See Canada Year Book, 1907, pp. xxiii-iv.

by the Extension of Boundaries (Manitoba) Act (2 Geo. V, c. 32). Other payments to the Provincial Governments by the Dominion Government consist of special grants, as compensation for lands and allowances for buildings, allowances in lieu of debt, etc.

16.—Subsidies and other Payments of Dominion to Provincial Governments, 1919-1923.

Provinces.	1919.	1920.	1921.	1922.	1923.
	$	$	$	$	$
Prince Edward Island	381,932	381,932	381,932	381,932	381,932
Nova Scotia	636,667	636,667	636,667	661,866	661,866
New Brunswick	637,976	637,976	637,976	666,766	666,766
Quebec	1,969,630	1,969,630	1,969,630	2,256,420	2,256,420
Ontario	2,396,379	2,396,379	2,396,379	2,642,612	2,642,612
Manitoba	1,447,335	1,470,991	1,470,991	1,470,991	1,466,380
Saskatchewan	1,680,077	1,753,075	1,753,075	1,763,883	1,763,883
Alberta	1,554,105	1,621,075	1,621,075	1,628,638	1,628,638
British Columbia	623,135	623,135	623,135	738,816	738,816
Total	**11,327,236**	**11,490,860**	**11,490,860**	**12,211,924**	**12,207,313**

17.—Total of Subsidy Allowances from July 1, 1867, to March 31, 1923.

Provinces.	Allowance for Government.	Allowance per head of Population.	Special Grants.[1]	Interest on Debt Allowance.[2]	Total.
	$	$	$	$	$
Prince Edward Island	2,620,000	4,265,555	2,949,626	2,137,370	11,972,551
Nova Scotia	5,440,000	18,728,622	826,980	2,602,186	27,597,788
New Brunswick	4,880,000	14,315,944	8,130,000	1,106,521	28,432,465
Quebec	6,640,000	60,646,200	–	3,794,725	71,080,925
Ontario	7,040,000	76,320,381	–	3,319,545	86,679,926
Manitoba	4,645,000	10,912,548	9,964,647	9,153,174	34,675,369
Saskatchewan	3,091,666	7,752,240	9,468,750	7,296,750	27,609,406
Alberta	3,066,667	6,152,283	9,000,000	7,296,750	25,515,700
British Columbia	4,040,000	7,153,811	6,200,000	1,525,639	18,919,450
Total	**41,463,333**	**206,247,584**	**46,540,003**	**38,232,660**	**332,483,580**

[1]Compensation for lands and allowances for buildings. [2]Allowance in lieu of debt.

National Debt.

The gross national debt of Canada on Mar. 31, 1914, was $544,391,369, as against assets of $208,394,519, leaving a net debt of $335,996,850. Comparatively small as was this debt, it was a debt incurred almost altogether either for public works of general utility which, like the Intercolonial and Transcontinental railways and the canal system, remained assets, though perhaps not realizable assets of the nation, or was expended as subsidies to enterprises, which, like the Canadian Pacific railway, though not government owned, assisted greatly in extending the area of settlement as well as the productive and therefore the taxable capacity of the country. Broadly speaking, it was a debt incurred for productive purposes. Also, it was mainly held outside the country, the principal of the Dominion funded debt payable on Mar. 31, 1914, in London being $302,842,485, as against only $717,453 payable in Canada.

The great changes brought about during the nine years from 1914 to 1923 in our national debt have been (1) the enormous increase in net debt from $335,996,850 to $2,453,776,869; (2) as having been largely incurred for war purposes, the gross debt is not represented by corresponding assets; (3) the debt is now mainly held in Canada; (4) the average rate of interest paid on interest-bearing debt has been considerably increased, the interest-bearing debt on Mar. 31, 1914, being $416,892,576, with an annual interest charge of $14,687,797, the average interest rate being thus only 3·52 p.c., while on Mar. 31, 1923, the interest-bearing debt was $2,653,869,212, with an interest charge of $136,007,667, the average rate of interest paid thus

being 5·125 p.c. Had it been possible to keep down the rate of interest to its pre-war level, the debt charge would be nearly $44,000,000 less than it is. Post-war conversions of debt to lower rates of interest are likely to reduce substantially our annual interest payments within the next few years.

A summary account of the loans effected since 1914 is appended.

War Loans.—The first Dominion domestic war loan was raised in November, 1915, under authority of chapter 23 of the Statutes of that year (5 Geo. V, c. 23). It originally consisted of $50,000,000 5 p.c. tax-exempt 10 year gold bonds, issued at 97½ and maturing December 1, 1925. As the issue was heavily over-subscribed (public subscriptions by 24,862 subscribers $78,729,500, bank subscriptions $25,000,000) and the extra money was needed, the Government increased the amount of the loan to $100,000,000. In July, 1915, $25,000,000 of 1 year and $20,000,000 of 2 year 5 p.c. notes had been floated in the United States, with the object of stabilizing exchange and of relieving the pressure on London.

In September, 1916, the second Canadian domestic war loan of $100,000,000 5 p.c. tax-exempt 15 year gold bonds was issued and again over-subscribed (public subscriptions by 34,526 subscribers $151,444,800, bank subscriptions $50,000,000). In March of that year, a loan of $75,000,000 in 5, 10 and 15 year 5 p.c. bonds had been floated in New York.

The third Canadian domestic war loan, composed of $150,000,000 5 p.c. tax-exempt 20 year gold bonds issued at 96, was issued in March, 1917, and was again over-subscribed, 40,800 public subscribers applying for $200,768,000, while the banks subscribed $60,000,000. In August, 1917, $100,000,000 of 5 p.c. 2 year notes were issued in New York at 98.

Hitherto the process of raising money had been comparatively easy. The buoyancy of Canadian finance was illustrated by the increasing subscriptions to each successive loan, while the Government could, when needed, obtain additional funds in New York. In April, 1917, however, the United States entered the war. Its gigantic preparations drained enormous sums of money from the New York money market, and made it difficult for other countries to raise money there. Henceforth Canada had in the main to depend on her own people to supply the funds necessary for keeping her steadily increasing forces in the field. Subsequent appeals for war loan subscriptions had to be made to the masses of the people rather than to the comparatively few wealthy or comfortably-off investors.

The fourth domestic war loan (First Victory Loan) issued in November, 1917, illustrates the foregoing remarks. For the first time subscriptions as low as $50 were received towards an issue of $150,000,000 5½ p.c. 5, 10 and 20 year gold bonds, the Minister of Finance reserving the right to allot the whole or any part of the amount subscribed in excess of $150,000,000. The subscribers numbered 820,035 and the subscriptions totalled $398,000,000, or about $50 per head of the population of Canada.

The fifth domestic war loan (Second Victory Loan) of $300,000,000 5½ p.c. 5 and 15 year tax-exempt gold bonds was issued at 100 and interest as of date November 1, 1918, and the end of the war, then clearly in sight, stimulated public subscriptions. The applications numbered 1,067,879 and totalled $660,000,000.

The sixth domestic war loan (Third Victory Loan) was raised at 100 and interest in November, 1919. It consisted of $300,000,000 taxable 5 year and 15 year 5½ p.c. gold bonds. The subscriptions amounted to $678,000,000.

A 5½ p.c. renewal loan, aggregating $114,464,150 and due in 1927 and 1932, was floated in Canada in the autumn of 1922 to pay off the maturing 5 year Victory Loan bonds of 1917. Largely for the same purpose a $100,000,000 5 p.c. loan was issued in New York.

The general result of these loans has been that in 1923 the great bulk of the Canadian national debt is owing to the Canadian people. At the end of the fiscal year 1922-23, the net funded debt of Canada payable in London was officially stated as $304,770,796, in New York as $210,933,000, while the net funded debt payable in Canada amounted to no less than $1,937,031,954. The largest creditors of the Dominion Government are within the Dominion itself, and as a consequence the interest payments made on national debt account outside the country are a relatively small item. Detailed statistics of the national debt as on Mar. 31, 1923, are given in Table 21.

In the autumn of 1923 a second 5 p.c. renewal loan of $200,000,000 was issued in Canada to pay off the maturing 5 year Victory Loan bonds of 1918.

18.—Summary of the Public Debt of Canada, March 31, 1917-1923.

Description.	1917.	1918.	1919.	1920.	1921.	1922.	1923.
	$	$	$	$	$	$	$
Total debt	1,382,003,268	1,863,335,899	2,676,635,725	3,041,529,587	2,902,482,117	2,902,347,137	2,888,827,237
Total assets	502,816,970	671,451,836	1,102,104,692	792,660,963[1]	561,603,133[1]	480,211,335[1]	435,050,368[1]
Net debt	**879,186,298**	**1,191,884,063**	**1,574,531,033**	**2,248,868,624**	**2,340,878,984**	**2,422,135,802**	**2,453,776,869**
Interest on debt	35,802,567	47,845,585	77,431,432	107,527,089	139,551,520	135,247,849	137,892,735
Interest on investments	3,094,012	4,466,724	7,421,002	17,086,981	24,815,246	21,961,513	16,465,303

[1]Active assets only.

19.—Details of the Assets of the Public Debt of Canada, March 31, 1920-1923.

Items.	1920.	1921.	1922.	1923.
Cash on hand and in banks	$156,652,549	$ 50,177,300	$ 23,899,777	$ 4,256,042
Specie reserve	105,067,644	83,959,873	85,710,325	130,150,335
Advances to banks, provinces, etc.	157,124,864	138,705,097	103,591,694	75,433,038
Advances to Imperial and Foreign Governments	211,173,198	187,408,305	162,766,689	106,540,470
Advances to Soldiers' Settlement Board	41,735,530	69,366,217	78,293,234	83,325,152
Sinking Funds	22,338,941	1	1	1
Miscellaneous current accounts	98,568,237	31,986,341	25,949,616	35,345,331
Total	**792,660,963**	**561,603,133**	**480,211,335**	**435,050,368**

[1]Sinking funds are no longer included in the assets, as they are shown as deductions from the funded debt.

20.—Details of the Gross Liabilities of Canada, March 31, 1920-1923.

Items.	1920.	1921.	1922.	1923.
	$	$	$	$
Funded debt payable in London	336,001,470	310,334,996[1]	307,641,659[1]	304,770,796[1]
Canada	2,066,856,126	1,988,494,357[1]	2,002,215,601[1]	1,937,031,954[1]
New York	135,873,000	135,874,000	110,934,000	210,933,000
Dominion notes	311,932,792	277,882,885	241,461,426	242,657,765
Savings banks	42,334,813	39,160,808	34,666,834	31,791,106
Temporary loans	88,862,000	90,835,000	144,535,000	95,432,000
Bank circulation redemption fund	5,958,543	6,311,493	6,533,999	6,454,150
Trust funds	13,550,967	17,642,642	18,647,974	19,621,238
Province accounts	9,624,153	9,624,153	9,624,153	9,624,153
Miscellaneous	30,535,723	26,321,783	26,086,491	30,511,075
Total	**3,041,529,587**	**2,902,482,117**	**2,902,347,137**	**2,888,827,237**

[1]Less Sinking Funds.

21.—Funded Debt Payable in London, New York and Canada, together with Temporary Loans, as at March 31, 1923.

Description.	Amount.	Interest payable thereon.	Date of Maturity.
PAYABLE IN LONDON.	$	$	
4½ per cent loan of 1920-25	24,333,333	1,095,000	May 1, 1925 (on or after May 1, 1920, on giving 3 months' notice).
4 " " 1940-60	93,926,667	3,757,067	October 1, 1960 (on or after Oct. 1 1940, on giving 3 months' notice.)
3½ " " 1884	23,467,206	821,352	On giving 6 months' notice or June 1 1934.
3½ " " C.P. Ry. land grant	15,056,007	526,960	July 1, 1938.
3½ " " 1930-50	137,058,841	4,797,059	July 1, 1950 (on or after July 1, 1930, on giving 6 months' notice).
3 " " 1888	8,071,230	242,137	July 1, 1938.
3 " " 1892	18,250,000	547,500	July 1, 1938.
3 " " 1894	10,950,000	328,500	July 1, 1938.
2½ " " 1897	4,888,186	122,205	October 1, 1947.
Gross Total	**336,001,470**	**12,237,780**	
Less Sinking Funds	31,230,674	-	
Net Total	**304,770,796**	-	

21.—Funded Debt Payable in London, New York and Canada, together with Temporary Loans, as at March 31, 1923—concluded.

Description.	Amount.	Interest payable thereon.	Date of Maturity.
PAYABLE IN NEW YORK.	$	$	
5 per cent Bond Loan, 1915–1935	874,000	43,700	August 1, 1935.
5 " Public Service Loan, 1916	59,000	–	April 1, 1921 (overdue).
5 " " " "	25,000,000	1,250,000	April 1, 1926.
5 " " " "	25,000,000	1,250,000	April 1, 1931.
5 " Bond Loan, 1922–52	100,000,000	5,000,000	May 1, 1952.
5½ " " 1919–1929	60,000,000	3,300,000	August 1, 1929.
Total	**210,933,000**	**10,843,700**	
PAYABLE IN CANADA.			
Provincial Notes, Nova Scotia	39,199	–	–
Unpaid Warrants, Prince Edward Island	549	–	–
Compensation to seigneurs	12,140	–	–
Compensation to Townships	153	–	–
Province of New Brunswick, 6 per cent Loan Debentures	600	–	Overdue.
Province of Canada, 5 per cent Loan Debentures	400	–	"
Dominion Stock, issue A, 6 per cent	8,000	480	Various dates.
" " A, 3½ "	12,537	439	
" " B, 3½ "	45,500	1,593	
" " C, 3½ "	48,667	1,703	
" " F, 3½ "	60,800	2,128	July 1, 1925.
Debenture Stock, 5 per cent 1919	1,000	–	Oct. 1, 1919 (overdue).
" 5 per cent 1922 School Lands	24,133,000	1,206,650	–
" 5½ per cent 1919	700	–	June 1, 1919 (overdue).
War Savings Certificates	59,842	–	Overdue.
Dominion of Canada Savings Certificates	4,077,113	224,241	Various dates.
War Savings and Thrift Stamps	1,748,853	87,443	January 1, 1924.
Dominion of Canada War Loan, 1915-1925, 5 per cent	42,014,500	2,100,725	Dec. 1, 1925.
Dominion of Canada War Loan, 1916-1931, 5 per cent	52,931,600	2,646,580	Oct. 1, 1931.
Dominion of Canada War Loan, 1917-1937, 5 per cent	90,166,900	4,508,345	March 1, 1937.
Victory Loan 1917, 5½ per cent, due 1922	3,117,650	–	Dec. 1, 1922 (overdue).
Victory Loan 1917, 5½ per cent, due 1927	63,437,250	3,489,048	Dec. 1, 1927.
Victory Loan 1917, 5½ per cent, due 1937	236,298,850	12,996,437	Dec. 1, 1937.
Victory Loan 1918, 5½ per cent, due 1923	172,459,650	9,485,281	Nov. 1, 1923.
Victory Loan 1918, 5½ per cent, due 1933	446,663,800	24,566,509	Nov. 1, 1933.
Victory Loan 1919, 5½ per cent, due 1924	107,955,650	5,937,561	Nov. 1, 1924.
Victory Loan 1919, 5½ per cent, due 1934	511,910,650	28,155,086	Nov. 1, 1934.
Renewal Loan 1922, 5½ per cent, due 1927	29,068,400	1,598,762	Nov. 1, 1927.
Renewal Loan 1922, 5½ per cent, due 1932	85,395,750	4,696,766	Nov. 1, 1932.
Bond Loan, 3½ per cent, 1925–1928	2,000,000	70,000	March 1, 1928.
Bond Loan, 4½ per cent, 1925–1945	65,207,351	2,934,330	Dec. 1, 1945.
Gross Total	**1,938,877,054**	**104,710,107**	
Less Sinking Funds	1,845,100	–	
Net Total	**1,937,031,954**	–	
TEMPORARY LOANS			
Loan of 1917-19, New York, 5 per cent	12,000	–	August 1, 1919.
Treasury Bills, Canada, 5½ per cent	4,680,000	–	April 1, 1923.
Treasury Bills, Canada, 5½ per cent	41,060,000	–	April 15, 1923.
Treasury Bills, Canada, 5½ per cent	19,325,000	–	May 2, 1923.
Treasury Bills, Canada, 5½ per cent	29,655,000	–	May 15, 1923.
Total	**94,732,000**	–	–
Debenture Stock, 5 per cent	700,000	–	Payable on demand.
Total	**95,432,000**	–	–

22.—Public Debt of Canada, July 1, 1867, to March 31, 1923.

Fiscal years.	Total debt.	Total assets.	Net debt.	Increase or decrease of debt.	Interest on debt.	Interest received from invested assets.
	$	$	$	$	$	$
1867	93,046,052	17,317,410	75,728,642	–	–	–
1868	96,896,666	21,139,531	75,757,135	28,493	4,501,568	126,420
1869	112,361,998	36,502,679	75,859,319	102,184	4,907,014	313,021
1870	115,993,706	37,783,964	78,209,742	2,350,423	5,047,054	383,956
1871	115,492,683	37,786,165	77,706,518	−503,225	5,165,304	554,384
1872	122,400,179	40,213,107	82,187,072	4,480,554	5,257,231	488,042
1873	129,743,432	29,894,970	99,848,462	17,661,390	5,209,206	396,404
1874	141,163,551	32,838,587	108,324,964	8,476,502	5,724,436	610,863
1875	151,663,402	35,655,024	116,008,378	7,683,414	6,590,790	840,887
1876	161,204,688	36,653,174	124,551,514	8,543,136	6,400,902	798,906
1877	174,675,835	41,440,526	133,235,309	8,683,795	6,797,227	717,684
1878	174,957,269	34,595,199	140,362,070	7,126,761	7,048,884	605,774
1879	179,483,871	36,493,684	142,990,187	2,628,117	7,194,734	592,500
1880	194,634,441	42,182,852	152,451,589	9,461,402	7,773,869	834,793
1881	199,861,537	44,465,757	155,395,780	2,944,191	7,594,145	751,513
1882	205,365,252	51,703,601	153,661,651	−1,734,129	7,740,804	914,009
1883	202,159,104	43,692,390	158,466,714	4,805,063	7,668,552	1,001,193
1884	242,482,416	60,320,566	182,161,850	23,695,136	7,700,181	986,698
1885	264,703,607	68,295,915	196,407,692	14,245,842	9,419,482	1,997,036
1886	273,164,341	50,005,234	223,159,107	26,751,415[1]	10,137,009	2,299,079
1887	273,187,626	45,872,851	227,314,775	4,155,668	9,682,929	990,887
1888	284,513,842	49,982,484	234,531,358	7,216,583	9,823,313	932,025
1889	287,722,063	50,192,021	237,530,042	2,998,684	10,148,932	1,305,392
1890	286,112,295	48,579,083	237,533,212	3,170	9,656,841	1,082,271
1891	289,899,230	52,090,199	237,809,031	275,819	9,584,137	1,077,228
1892	295,333,274	54,201,840	241,131,434	3,322,403	9,763,978	1,086,420
1893	300,054,525	58,373,485	241,681,040	549,606	9,806,888	1,150,167
1894	308,348,023	62,164,994	246,183,029	4,501,989	10,212,596	1,217,809
1895	318,048,755	64,973,828	253,074,927	6,891,898	10,466,294	1,336,047
1896	325,717,537	67,220,104	258,497,433	5,422,506	10,502,430	1,370,001
1897	332,530,131	70,991,535	261,538,596	3,041,163	10,645,663	1,443,004
1898	338,375,984	74,419,585	263,956,399	2,417,803	10,516,758	1,513,455
1899	345,160,903	78,887,456	266,273,447	2,317,048	10,855,112	1,590,448
1900	346,206,980	80,713,173	265,493,807	−779,640	10,699,645	1,683,051
1901	354,732,433	86,252,429	268,480,004	2,986,197	10,807,955	1,784,834
1902	366,358,477	94,529,387	271,829,090	3,349,086	10,975,935	1,892,224
1903	361,344,098	99,737,109	261,606,989	−10,222,101[2]	11,068,139	2,020,953
1904	364,962,512	104,094,793	260,867,719	−739,270[3]	11,128,637	2,236,256
1905	377,678,580	111,454,413	266,224,167	5,356,448	10,630,115	2,105,031
1906	392,269,680	125,226,703	267,042,977	818,810	10,814,697	2,140,312
1907 (9 mos)	379,966,826	116,294,966	263,671,860	−3,371,117	6,712,771	1,235,746
1908	408,207,158	130,246,298	277,960,860	14,289,000	10,973,597	1,925,569
1909	478,535,427	154,605,148	323,930,279	45,969,419	11,604,584	2,256,643
1910	470,663,046	134,394,500	336,268,546	12,338,267	13,098,161	2,807,465
1911	474,941,487	134,899,435	340,042,052	3,773,506	12,535,851	1,668,773
1912	508,338,592	168,419,131	339,919,461	−122,591	12,259,397	1,281,317
1913	483,232,555	168,930,930	314,301,625	−25,617,836	12,605,882	1,430,511
1914	544,391,369	208,394,519	335,996,850	21,695,225	12,893,505	1,964,541
1915	700,473,814	251,097,731	449,376,083	113,379,233	15,736,743	2,930,247
1916	936,987,802	321,831,631	615,156,171	165,780,088	21,421,585	3,358,210
1917	1,382,003,268	502,816,970	879,186,298	264,030,127	35,802,567	3,094,012
1918	1,863,335,899	671,451,836	1,191,884,063	312,697,765	47,845,585	4,466,724
1919	2,676,635,725	1,102,104,692	1,574,531,033	382,646,970	77,431,432	7,421,002
1920	3,041,529,587	792,660,963[4]	2,248,868,624	674,337,591	107,527,089	17,086,981
1921	2,902,482,117	561,603,133[4]	2,340,878,984	92,010,360	139,551,520	24,815,246
1922	2,902,347,137	480,211,335[4]	2,422,135,802	81,256,817	135,247,849	21,961,513
1923	2,888,827,237	435,050,368[4]	2,453,776,869	31,641,067	137,892,735	16,465,303

NOTE.—The minus sign (−) denotes a decrease.

[1]This amount includes $10,199,520, for which land was taken from the Canadian Pacific Ry. Co.

[2]This amount included $3,305,450 caused by the settlement of accounts with Ontario and Quebec.

[3]This amount takes into account $5,397,503 allowed to Ontario and Quebec, under 47 V, c. 6.

[4]Active assets only.

2.—Provincial Public Finance.

Provincial Governments in Canada are in the position, under section 118 of the British North America Act, 1867 (30 and 31 Vict., c. 3), and the British North America Act, 1907 (7 Edw. VII, c. 11), of having a considerable assured income in subsidies from the Dominion Treasury. Details of these payments are given for recent years in Tables **16** and **17** of this section. In addition, through their retention of ownership of their lands, minerals and other natural resources, the provinces, which, by the voluntary action of their previously existing governments, entered Confederation, raise considerable revenues through land sales, sales of timber, mining royalties, leases of water-powers, etc., while the prairie provinces receive from the Dominion special grants in lieu of land revenues. Further, under section 92 of the British North America Act, Provincial Legislatures are given authority to impose direct taxation within the province for provincial purposes and to borrow money on the sole credit of the province.

While the *laisser faire* school of political thought was predominant throughout the country, provincial receipts and expenditures were generally very moderate, as may be seen both for individual provinces and for the provinces collectively, from Table **23**. From the commencement of the twentieth century, however, the Canadian public, more especially in Ontario and the West, began to demand increased services from the government, particularly along the lines of education, sanitation and public ownership and operation of public utilities. The performance of these functions necessitated increased revenues, which had in the main to be raised by taxation. Among the chief methods of taxation to be employed has been the taxation of corporations and estates, succession duties showing a considerably increased yield even within the comparatively short period of five years from 1917 to 1921 covered by the statement compiled by the Finance Branch of the Dominion Bureau of Statistics,[1] and published as Table **25**. Prominent among the objects of increased expenditure in this same period are education, public buildings, public works and enterprises and charities, hospitals and corrections. The fact that provincial government is cheaper per head in the *laisser faire* eastern provinces is evident from Table **24**, which gives the total and per capita ordinary revenue and expenditure for each of the three provincial fiscal years ended in 1921. This, however, is not to be taken as evidence that the larger services rendered to the public in the western provinces are not worth what is being paid for them.

For the half century subsequent to Confederation, the provincial accounts, published by each Government according to its own system of accounting, were quite incomparable as between the provinces, a fact much regretted by students of provincial public finance. Upon the creation of the Dominion Bureau of Statistics in 1918, its Finance Branch undertook the work of placing the various provincial public accounts on a comparable basis, correlating, for example, the revenues derived from succession duties, taxation of corporations, sales of public lands, royalties on forest, mineral and fisheries products, as well as the expenditures on such services as agriculture, civil government, education and public works. As the result of the Bureau's exhaustive analysis of the provincial public accounts, a summary statement of the ordinary receipts and expenditure of the Provincial Governments appeared for the first time in the 1919 Year Book. In the present issue an analysis is given of the provincial public accounts for the five fiscal years

[1]The succession duties collected by the provinces in 1921 amounted in the aggregate to $8,546,923, as compared with $1,020,972 as recently as 1904, or an eight-fold increase in 17 years. The aggregate revenue raised by taxation of corporations, etc., increased from $7,217,548 in 1916 to $18,360,120 in 1921.

from 1917 to 1921. In it the various items of receipts and expenditures have been classified under appropriate headings, and a uniform terminology has been adopted. The result is given in Tables **25** and **26,** which present summary statements of the ordinary receipts and expenditures of all the Provincial Governments for each of the five provincial fiscal years from 1917 to 1921. From these statements it is possible to ascertain the amounts received and expended in each year under the respective headings for each province, while Table **27** supplies the same information for the provinces collectively.[1]

In the use of these tables it should be borne in mind that the fiscal years in the different provinces do not coincide. In Prince Edward Island, Manitoba and Alberta the fiscal year ends December 31, in Nova Scotia, September 30, in New Brunswick and Ontario, October 31, in Quebec, June 30, in Saskatchewan, April 30, and in British Columbia, March 31.

The total ordinary revenue of the nine provinces, for their latest fiscal year for which final data are available, ended 1921, was $102,030,458, as compared with $92,653,023 in 1920, $76,844,307 in 1919, $69,345,305 in 1918, $57,989,984 in 1917 and $50,015,795 in 1916. The total ordinary expenditure in 1921 was $102,569,515 as against $88,250,675 in 1920, $76,403,973 in 1919, $66,052,909 in 1918, $60,122,485 in 1917 and $53,826,219 in 1916. Thus the total ordinary revenue of the provinces shows an increase of 104 p.c. in the short space of five years, while the total ordinary expenditure shows an increase of 90·6 p.c. The main cause of the increasing expenditure has been, of course, the rapid rise during the period in the prices of the commodities and labour required for the public service, while the extension of the functions of government has also been a considerable factor. The available figures for 1922 indicate continued increases. (Table **23.**)

Considering the individual provinces, the largest revenue for 1921 is that of Ontario, $30,411,396, Quebec being next with $15,914,521 and British Columbia third with $15,219,264. As regards total expenditure for the same year, that of Ontario was highest, $28,579,688, British Columbia second with $15,236,931 and Quebec third with $14,624,088. In 1921 British Columbia raised the largest revenue per head of population, $29.01, while Quebec had the lowest, $6.19.

Provincial Assets and Liabilities—The asset and liability statements of the provinces vary so greatly in their content that heretofore no attempt has been made to publish any collective statement. In some instances natural resources, such as timber, mining, agricultural and school lands unsold, are shown as assets while in others no account is taken of these. In other cases provincial government buildings with lands connected therewith, also roads, bridges and public improvements are considered as assets, while other provinces do not include them in their published statements. With a view to presenting the principal items which make up provincial assets and liabilities, the following co-ordinated table (Table **28**) has been compiled, in consultation with the various provincial audit departments. Other miscellaneous assets of the provinces are briefly enumerated. Indirect liabilities, which are separately given, consist mainly, as shown by the foot-notes, of guarantees of bonds and debentures. Generally speaking, both the assets and the liabilities of the provinces in which public ownership of public utilities exists, are proportionately larger than is the case in the other provinces.

[1]A report giving details of the finances of Provincial Governments for 1921, with summary statistics for the years from 1916 to 1920, has recently been published. Copies may be obtained on application to the Dominion Bureau of Statistics, Ottawa.

23.—Statement showing the Ordinary Revenues and Expenditures of the Provincial Governments for their respective fiscal years ended 1869-1922.

Years.	Prince Edward Island.		Nova Scotia.		New Brunswick.		Quebec.	
	Receipts.	Expenditure.[2]	Receipts.	Expenditure.	Receipts.	Expenditure.	Receipts.	Expenditure.
	$	$	$	$	$	$	$	$
1869-72 (total 4 yr.)	1,372,064	1,569,447	2,360,891	2,295,304	1,939,397	1,978,949	6,638,866	6,072,289
1873	484,979[1]	401,662[1]	600,196	608,919	568,550	540,486	1,795,749	1,707,356
1874	403,013	442,767	686,826	676,111	591,465	589,794	1,983,603	1,908,283
1875	306,597	395,277	616,350	714,803	608,099	679,814	2,036,869	2,060,779
1876	524,144	353,226	589,637	653,874	634,850	587,330	2,329,868	2,283,025
1877	326,274	331,632	562,800	588,942	618,113	650,233	2,397,383	2,471,553
1878	312,684	334,133	645,294	688,003	584,977	640,815	2,018,482	2,577,171
1879	288,062	313,845	394,205	503,051	526,685	616,132	2,201,215	2,715,549
1880	269,603	257,309	541,318	506,253	675,285	609,671	2,342,412	2,830,023
1881	275,380	261,276	476,445	494,582	607,445	598,844	3,191,779	3,566,612
1882	233,465	257,228	537,667	569,119	643,710	614,236	3,419,371	3,628,229
1883	228,169	270,477	563,864	541,099	822,889[3]	943,824[3]	2,755,707	3,096,943
1884	280,271	279,545	586,561	572,768	650,466[4]	633,658	2,823,565	3,124,620
1885	248,222	266,318	613,026	620,700	617,570	584,473	2,926,148	2,936,734
1886	233,978	304,467	633,145	656,348	634,574	623,593	2,949,562	3,032,607
1887	241,736	288,052	656,639	664,103	665,819	667,647	2,965,567	3,288,798
1888	254,209	279,939	712,951	668,400	664,880	640,806	2,738,768	3,365,032
1889	234,635	263,605	668,774	713,941	651,031	637,051	3,628,544	3,543,619
1890	224,882	305,799	664,938	710,497	646,079	651,735	3,537,407	3,894,413
1891	274,047	304,486	661,541	692,538	612,762	680,813	3,457,144	4,095,520
1892	245,652	259,012	769,976	822,462	652,669	676,483	3,458,404	4,446,640
1893	217,473	294,201	682,567[5]	642,385[5]	730,877	711,673	4,373,363	3,907,445
1894	282,468	280,596	888,213	862,842	619,298[6]	661,521[6]	4,258,728	4,267,946
1895	277,314	310,177	835,455	831,230	687,437	684,635	4,221,687	4,189,985
1896	273,496	287,631	841,160	853,893	698,437	701,452	4,327,910	4,099,707
1897	272,550	310,752	832,240	853,699	745,203	727,187	3,877,466	4,892,282
1898	276,183	301,700	855,960	849,330	708,809	727,050	4,176,140	4,415,370
1899	282,678	276,789	876,828	852,379	764,439	749,644	4,223,579	4,201,023
1900	282,056	308,494	1,014,123	937,261	758,989	794,477	4,451,578	4,433,386
1901	309,445	315,326	1,090,230	1,088,927	1,031,267	910,346	4,563,432	4,516,554
1902	324,670	324,185	1,140,217	1,087,403	826,066	845,637	4,515,170	4,490,677
1903	318,766	327,662	1,243,581	1,177,331	801,410	816,295	4,699,773	4,596,061
1904	307,730	356,120	1,194,756	1,161,456	890,653	885,457	4,880,687	4,795,469
1905	313,445	334,734	1,324,531	1,303,708	865,637	874,420	5,039,001	4,989,906
1906	258,235[7]	264,135[7]	1,391,629	1,375,588	887,202	879,066	5,340,167	5,179,817
1907	350,479	346,081	1,438,167	1,539,169	969,939	960,093	5,270,595	4,767,070
1908	366,601	377,603	1,783,467	1,624,760	1,086,738	1,042,196	6,016,616	4,980,919
1909	375,374	366,938	1,632,979	1,653,508	1,259,827	1,255,382	6,082,187	5,539,880
1910	375,151	382,891	1,592,363	1,725,914	1,324,440	1,317,876	6,571,944	5,627,755
1911	374,798	398,490	1,625,653	1,790,778	1,347,077	1,403,547	7,032,745	6,424,900
1912	485,565[8]	527,220[8]	1,870,056	1,832,075	1,417,722	1,409,049	8,070,109	7,386,680
1913	506,553	450,112	1,920,565	1,949,784	1,459,000	1,446,963	8,382,737	7,953,985
1914	525,555	445,396	1,885,458	2,098,893	1,505,229	1,493,774	9,000,377	8,624,368
1915	470,730	510,345	1,953,302	2,073,672	1,634,079	1,626,634	9,597,926	8,710,516
1916	508,455	453,151	2,165,338	2,152,773	1,580,419	1,568,340	9,647,984	9,436,687
1917	496,053	487,113	2,118,620	2,344,009	1,572,814	2,166,904	10,441,114	9,907,672
1918	514,475	484,416	2,332,634	2,573,797	2,357,909	2,399,062	13,806,392	11,671,830
1919	501,915	655,409	3,280,313	3,280,282	2,182,420	2,595,937	12,666,352	12,371,131
1920	740,973	660,774	3,801,016	3,916,848	3,100,892	2,969,323	14,472,651	13,520,740
1921	769,719	694,042	4,586,840	4,678,146	2,892,905	3,432,512	15,914,521	14,624,088
1922	748,888	687,241	4,791,208	4,791,998	3,226,728	2,985,877	21,609,396	16,575,977

[1]11 months only. [2]Includes expenditure on capital account, except for 1900-1904. [3]14 months. [4]Contains $250,000, proceeds of bonds for funding floating debt. [5]For 9 months ended September 30. [6]10 months. [7]Nine months only, owing to change of fiscal year. [8]Fifteen months, owing to change of fiscal year.

23.—Statement showing the Ordinary Revenues and Expenditures of the Provincial Governments for their respective fiscal years ended 1869-1922—con.

Years.	Ontario.		Manitoba.		Saskatchewan.	
	Receipts.	Expenditure.	Receipts.	Expenditure.	Receipts.	Expenditure.
	$	$	$	$	$	$
1869-72 (total 4 yrs.)	11,532,880	8,277,724	–	–	–	–
1873	3,141,298	3,099,634	–	138,658	–	–
1874	3,446,348	3,883,702	24,611[7]	61,177[7]	–	–
1875	3,156,606	3,617,522	74,534	133,390	–	–
1876	2,589,085	3,152,365	150,010[8]	145,248[8]	–	–
1877	2,502,449	3,131,998	99,608	92,958	–	–
1878	2,284,656	2,914,864	98,864	107,926	–	–
1879	2,287,951	2,954,712	135,311	151,086	–	–
1880	2,584,152	2,531,166	118,867	185,109	–	–
1881	2,788,747	2,592,800	121,867	226,808	–	–
1882	2,880,450	2,931,825	255,208	232,189	–	–
1883	2,439,941	2,900,035	376,863	386,071	–	–
1884	2,820,555	3,207,890	302,962	501,710	–	–
1885	3,005,921	3,040,139	150,728[7]	229,278[7]	–	–
1886	3,148,660	2,181,450	485,326	484,002	–	–
1887	3,527,578	3,454,372	506,890	520,190	–	–
1888	3,602,862	3,544,835	841,894[8]	758,139[8]	–	–
1889	4,464,031	4,578,982	583,795	588,467	–	–
1890	3,434,259	3,907,428	585,709	708,302	–	–
1891	4,138,589	4,158,460	590,484	664,432	–	–
1892	4,662,922	4,068,257	605,288	832,890	–	–
1893	4,091,914	3,907,145	633,116	798,188	–	–
1894	3,453,163	3,839,339	613,094	699,319	–	–
1895	3,585,300	3,758,595	703,172	704,946	–	–
1896	3,490,671	3,703,380	665,353	763,158	–	–
1897	4,139,848	3,767,676	683,706	780,109	–	–
1898	3,710,928	3,864,971	936,604	837,888	–	–
1899	4,103,478	3,717,404	776,234	972,462	–	–
1900	4,192,940	4,003,729	905,331	1,085,405	–	–
1901	4,466,044	4,038,834	1,008,653	988,251	–	–
1902	4,291,083	4,345,004	1,443,256	1,248,128	–	–
1903	5,466,653	4,888,983	1,352,218	1,262,292	–	–
1904	6,128,358	5,267,453	1,486,667	1,271,733	–	–
1905	6,016,176	5,396,017	1,860,900	1,398,431	618,432[1]	118,602[1]
1906	7,149,478	6,720,179	2,089,652	1,572,691	1,441,258[2]	1,364,352[2]
1907	8,320,419	7,714,246	2,118,784	1,824,381	–	–
1908	8,602,903	8,557,065	2,891,582	2,534,794	1,844,371[4]	2,091,613[4]
1909	7,477,921	7,545,040	3,376,893	2,752,774	2,199,984[4]	2,654,690[4]
1910	8,891,005	8,887,520	3,847,322	3,234,941	2,514,698[4]	2,220,866[4]
1911	9,370,834	9,916,934	4,454,190	4,002,826	2,699,603[4]	2,575,145[4]
1912	10,042,001	10,287,992	7,046,675	4,339,540	4,385,831[4]	4,255,850[4]
1913	11,183,302	10,868,026	5,788,070	5,314,849	4,668,754[4]	4,656,800[4]
1914	11,121,382	11,819,311	5,512,163	5,638,659	6,372,540[5]	5,823,980[5]
1915	12,975,732	12,704,362	5,472,955	6,026,596	5,024,936[6]	5,368,649[6]
1916	13,841,339	12,706,333	5,897,807	6,147,780	4,801,064[6]	5,258,756[6]
1917	18,269,597	16,518,223	6,292,986	6,860,355	5,631,910[6]	5,553,965[6]
1918	19,270,122	17,460,404	6,723,013	7,307,727	7,797,153[6]	6,828,596[6]
1919	20,692,166[3]	21,464,575	8,613,364	8,497,942	8,333,759[6]	8,125,203[6]
1920	25,981,517[3]	25,880,843	9,870,710	10,602,955	9,903,885[6]	8,707,833[6]
1921	30,411,396[3]	28,579,688	9,358,956	10,063,139	11,789,920	12,151,665
1922	39,725,370[3]	37,442,986	7,940,457	8,381,667	11,801,894	13,322,119

Years.	Alberta.		British Columbia.		Totals for all Provinces.	
	Receipts.	Expenditure.	Receipts.	Expenditure.	Receipts.	Expenditure.
	$	$	$	$	$	$
1869-72 (total 4 yrs.)	–	–	519,036[9]	529,775[9]	24,363,134	20,723,488
1873	–	–	370,150	372,169	6,960,922	6,868,884
1874	–	–	372,418	583,360	7,508,284	8,145,194
1875	–	–	351,241	614,659	7,150,296	8,216,244
1876	–	–	381,120	728,310	7,198,714	7,903,378
1877	–	–	408,348	685,046	6,914,975	7,952,362
1878	–	–	430,786	514,879	6,375,743	7,777,791
1879	–	–	213,058[10]	186,715[10]	6,046,487	7,441,090
1880	–	–	390,908	446,575	6,922,545	7,366,106
1881	–	–	397,035	378,779	7,858,698	8,119,701
1882	–	–	405,583	474,428	8,375,454	8,707,254
1883	–	–	425,808	594,102	7,613,241	8,732,551
1884	–	–	503,174	590,629	7,967,554	8,910,820
1885	–	–	600,399	655,438	8,162,014	8,333,080
1886	–	–	514,720	772,211	8,599,965	8,054,678

[1]Four months only. Province created Sept. 1, 1905. [2]Fourteen months ending Feb. 28, 1907. [3]Includes capital revenue for lands, which cannot be separated. [4]Twelve months ending Feb. 28. [5]Fourteen months ending April 30. [6]Twelve months ending April 30. [7]Six months. [8]Eighteen months. [9]Six months of 1871 and for the year 1872. [10]Six months.

23.—Statement showing the Ordinary Revenues and Expenditures of the Provincial Governments, for their respective fiscal years 1869-1922—concluded.

Years.	Alberta.		British Columbia.		Total in all Provinces.	
	Receipts.	Expenditure.	Receipts.	Expenditure.	Receipts.	Expenditure.
	$	$	$	$	$	$
1887	–	–	537,335	731,307	9,101,564	9,614,469
1888	–	–	598,252	788,955	9,413,816	10,046,106
1889	–	–	698,055	857,545	10,928,865	11,183,210
1890	–	–	835,463	954,021	9,928,737	11,132,195
1891	–	–	959,248	1,032,104	10,693,815	11,628,353
1892	–	–	1,020,002	1,430,920	11,414,913	12,536,664
1893	–	–	1,019,206	1,431,438	11,748,516	11,692,475
1894	–	–	821,660	1,514,405	10,936,624	12,125,968
1895	–	–	896,025	1,906,924	11,206,390	12,386,492
1896	–	–	989,765	1,614,723	11,286,792	12,023,944
1897	–	–	1,383,048	1,569,071	11,934,061	12,900,776
1898	–	–	1,439,623	2,001,032	12,104,247	12,997,341
1899	–	–	1,531,639	2,156,474	12,558,875	12,926,175
1900	–	–	1,544,108	1,831,205	13,149,125	13,393,957
1901	–	–	1,605,920	2,287,821	14,074,991	14,146,059
1902	–	–	1,807,925	2,537,373	14,348,387	14,878,407
1903	–	–	2,044,630	3,393,182	15,927,031	16,461,806
1904	–	–	2,638,260	2,862,794	17,527,111	16,600,482
1905	635,976[1,2]	162,723[1,2]	2,920,462	2,302,418	19,594,560	16,880,959
1906	1,425,059[2]	1,485,914[2]	3,044,442	2,328,126	23,027,122	21,169,868
1907	2,081,828[2]	2,450,375[2]	4,444,594	2,849,480	24,994,805	22,450,895
1908	2,849,650[2]	2,823,831[2]	5,979,055	3,686,350	31,420,983	27,719,131
1909	3,135,727[2]	2,650,441	4,664,501[3]	3,749,171[3]	30,205,393	28,167,824
1910	2,488,406[2]	4,002,394	8,874,742	6,382,993	36,480,071	33,783,150
1911	3,309,156[2]	3,437,088	10,492,892	8,194,803	40,706,948	38,144,511
1912	4,100,113[2]	3,956,562	10,745,709	11,189,024	48,163,781	45,183,992
1913	5,399,905	5,225,584	12,510,215	15,412,322	51,819,101	53,278,425
1914	5,255,276	5,401,595	10,479,259	15,762,912	51,657,239	57,108,888
1915	5,143,590	5,714,032	7,974,496	11,942,667	50,247,746	54,677,473
1916	5,281,695	6,018,894	6,291,694	10,083,505	50,015,795	53,826,219
1917	6,260,106	6,752,504	6,906,784	9,531,740	57,989,984	60,122,485
1918	7,660,762	8,303,808	8,882,845	9,023,269	69,345,305	66,052,909
1919	9,642,739	9,525,749	10,931,279	9,887,745	76,844,307	76,403,973
1920	10,919,776	10,423,356	13,861,603	11,568,003	92,653,023	88,250,675
1921	11,086,937	13,109,304	15,219,264	15,236,931	102,030,458	102,569,515
1922	9,324,889[4]	11,235,192[4]	16,987,869	17,436,487	112,859,544[4]	116,156,699[4]

[1]Four months only. Province created Sept. 1, 1905. [2]Includes small sums of capital revenue and expenditure which cannot be separated. [3]Nine months only, owing to change in fiscal year. [4]Subject to revision.

24.—Annual Ordinary Receipts and Expenditures of the Provincial Governments per head of population, 1919-1921.

Provinces.	Revenue.			Expenditure.		
	1919.	1920.	1921.	1919.	1920.	1921.
	$	$	$	$	$	$
Prince Edward Island	501,915	740,973	769,719	655,409	660,774	694,042
Per head	5·61	8·32	8·69	7·33	7·42	7·83
Nova Scotia	3,280,313	3,801,016	4,586,840	3,280,282	3,916,848	4,678,146
Per head	6·35	7·31	8·76	6·35	7·53	8·93
New Brunswick	2,182,420	3,100,892	2,892,905	2,595,937	2,969,323	3,432,512
Per head	5·74	8·08	7·46	6·83	7·73	8·85
Quebec	12,666,352	14,472,651	15,914,521	12,371,131	13,520,740	14,624,088
Per head	5·54	6·23	6·74	5·41	5·82	6·19
Ontario	20,692,166	25,981,517	30,411,396	21,464,575	25,880,843	28,579,688
Per head	7·27	8·99	10·37	7·54	8·96	9·74
Manitoba	8,613,364	9,870,710	9,358,956	8,497,942	10,602,955	10,063,139
Per head	14·67	16·49	15·34	14·48	17·72	16·49
Saskatchewan	8,333,759	9,903,885	11,789,920	8,125,203	8,707,833	12,151,665
Per head	11·69	13·47	15·56	11·39	11·85	16·04
Alberta	9,642,739	10,919,776	11,086,937	9,525,749	10,423,356	13,109,304
Per head	17·50	19·17	18·84	17·28	18·30	22·28
British Columbia	10,931,279	13,861,603	15,219,264	9,887,745	11,568,003	15,236,931
Per head	21·99	27·14	29·01	19·89	22·65	29·05
Totals	**76,844,307**	**92,653,023**	**102,030,458**	**76,403,973**	**88,250,675**	**102,569,515**
Per head	**9·08**	**10·75**	**11·63**	**9·02**	**10·24**	**11·69**

NOTE.—In making the calculations for this table the Bureau of Statistics' estimates of the populations of the provinces, based upon the results of the census of 1921, have been used.

25.—Classified Summary Statement of Ordinary Receipts of Provincial

Sources of Receipts.	Prince Edward Island.				
	1917.	1918.	1919.	1920.	1921.
	$	$	$	$	$
Subsidies and other Receipts from Dominion Government	372,182	372,182	372,182	372,182	372,182
Agriculture	289	5,908	1,811	663	1,943
Lands	619	785	802	1,014	190
Mines and Mining	–	–	–	–	–
Woods, Forest and Timber	–	–	–	–	–
Game and Fisheries	–	17	–	–	–
Fines, Penalties and Forfeitures	898	302	35	95	23
Fees (other than succession duties)	9,474	9,150	10,923	13,103	13,847
Succession Duties	4,199	3,422	3,088	7,936	10,568
Taxation of Corporations, etc	97,498	108,543	87,839	245,573	285,825
Licenses and Permits	1,442	11,580	27,378	86,024	74,290
Education	–	–	–	–	–
Charities, Hospitals and Corrections	6,557	8,007	7,130	10,178	7,717
Interest	–	–	–	–	–
Refunds and Repayments	1,747	41	42	28	2,544
Miscellaneous	1,148	7,189	2,079	4,177	590
Total Ordinary Receipts	**496,053**	**514,475**[1]	**501,915**[1]	**740,973**	**769,719**

Sources of Receipts.	Quebec.				
	1917.	1918.	1919.	1920.	1921.
	$	$	$	$	$
Subsidies and other Receipts from Dominion Government	2,027,991	2,028,028	2,028,069	2,028,163	2,028,241
Agriculture	35,522	23,880	34,647	24,875	28,160
Lands	178,880	191,889	485,571	425,468	183,585
Mines and Mining	30,740	128,864	278,309	378,480	642,285
Woods, Forest and Timber	1,574,353	1,418,191	2,029,361	2,610,324	3,039,764
Game and Fisheries	151,405	209,313	231,981	291,719	299,397
Fines, Penalties and Forfeitures	12,032	31,045	30,404	57,154	122,861
Fees (other than succession duties)	938,239	743,810	898,534	1,062,503	1,170,764
Succession Duties	1,741,263	4,736,548	1,459,015	1,786,931	2,100,456
Taxation of Corporations, etc	1,236,470	1,405,215	1,711,904	1,854,528	1,818,369
Licenses and Permits	1,815,301	2,025,554	2,236,444	2,694,242	2,590,695
Education	–	–	–	–	–
Charities, Hospitals and Corrections	188,942	273,772	664,891	450,047	509,506
Interest	118,771	179,276	141,249	146,249	221,470
Refunds and Repayments	94,154	92,671	109,937	172,514	222,766
Miscellaneous	297,051	318,336	326,036	489,454	936,202
Total Ordinary Receipts	**10,441,114**	**13,806,392**	**12,666,352**	**14,472,651**	**15,914,521**

Sources of Receipts.	Saskatchewan.				
	1917.	1918.	1919.	1920.	1921.
	$	$	$	$	$
Subsidies and other Receipts from Dominion Government	1,983,721	2,207,696	2,307,148	2,654,840	3,088,646
Agriculture	18,179	15,548	23,378	37,203	29,029
Lands	–	–	–	–	–
Mines and Mining	–	–	40	–	–
Woods, Forest and Timber	–	–	–	–	–
Game and Fisheries	24,148	19,777	23,604	28,984	32,417
Fines, Penalties and Forfeitures	54,234	67,343	98,182	84,079	125,224
Fees (other than succession duties)	1,132,828	1,033,193	962,933	1,071,411	1,177,591
Succession Duties	69,996	117,335	154,680	278,970	331,370
Taxation of Corporations, etc	348,563	1,301,664	2,491,909	3,439,915	3,660,171
Licenses and Permits	534,026	1,325,106	801,171	746,049	1,027,235
Education	37,238	47,058	43,967	28,990	30,584
Charities, Hospitals and Corrections	51,286	94,989	92,549	84,362	–
Interest	483,082	699,062	539,878	674,693	956,589
Refunds and Repayments	369,596	367,863	18,315	90,238	334,659
Miscellaneous	525,013	500,519	776,005	684,151	996,405
Total Ordinary Receipts	**5,631,910**	**7,797,153**	**8,333,759**	**9,903,885**	**11,789,920**

[1]These totals are exclusive of the Motor Vehicle Tax, amounting in 1918 to $12,651 and in 1919 to $11,344 net, transferred to the Public Works Department and earmarked for highway improvement.

[2]These totals include capital revenue to the amount of $787,394 in 1919 and $903,422 in 1920, and $1,149,919 in 1921 received from the Department of Lands and Forests, and not separable into its items.

Governments for their respective fiscal years 1917-1921.

Nova Scotia.					New Brunswick.				
1917	1918.	1919.	1920.	1921.	1917.	1918.	1919.	1920.	1921.
$	$	$	$	$	$	$	$	$	$
636,667	636,667	636,667	636,667	636,667	637,976	637,976	637,976	637,976	637,976
11,789	14,509	19,546	21,907	18,255	21,095	179,743	17,071	2,399	2,401
20,331	24,010	42,002	52,878	42,958	336	323	51	561	3,886
740,687	656,989	622,420	690,518	635,577	27,944	46,767	36,809	34,062	34,932
–	–	–	–	–	442,892	591,872	685,276	1,385,420	973,067
3,307	2,291	1,420	4,843	8,466	69,547	53,027	76,162	82,135	93,154
470	1,404	23,828	6,729	3,081	8,769	29,489	48,040	75,753	89,787
38,604	61,232	82,341	199,783	162,182	47,430	48,361	59,898	78,496	84,219
130,870	117,393	180,962	195,600	158,972	30,436	90,418	79,325	90,610	151,326
96,085	149,894	308,225	349,210	572,818	111,832	310,869	187,754	266,536	282,334
71,844	193,116	292,333	449,076	627,254	78,884	126,593	191,695	290,517	363,275
51,626	59,701	79,658	105,754	159,424	25,674	23,302	21,753	25,891	57,374
153,898	242,846	406,552	505,124	447,854	52,733	62,359	72,194	81,656	82,825
158,010	166,369	158,333	209,866	160,522	6,711	8,064	6,621	23,564	10,077
675	312	1,100	274	832	594	742	723	770	735
3,757	5,901	424,926	372,787	951,978	9,961	148,004	61,072	24,546	25,537
2,118,620	**2,332,634**	**3,280,313**	**3,801,016**	**4,586,840**	**1,572,814**	**2,357,909**	**2,182,420**	**3,100,892**	**2,892,905**

Ontario.					Manitoba.				
1917.	1918.	1919.	1920.	1921.	1917.	1918.	1919.	1920.	1921.
$	$	$	$	$	$	$	$	$	$
2,469,931	2,469,977	2,470,064	2,470,160	2,470,274	1,643,642	1,731,301	1,859,034	2,002,169	1,821,379
25,793	179,449	86,139	65,771	87,934	2,433	5,821	7,630	6,234	8,798
134,613	95,366	127,363[2]	148,767[2]	198,409[2]	162,330	166,858	106,838	125,305	91,615
1,694,465	1,054,066	762,493	1,113,545	499,069	–	–	–	–	–
1,703,425	1,776,377	1,837,272[2]	2,731,549[2]	3,784,203[2]	–	–	–	–	–
215,810	480,009	680,979	791,537	836,156	27,154	25,151	36,933	53,377	80,814
55,549	100,110	111,253	99,748	125,054	77,814	87,147	109,971	139,658	142,508
514,379	631,380	686,365	1,042,908	934,857	338,292	320,116	433,441	584,685	471,974
3,228,226	3,157,567	3,526,592	4,014,468	4,821,811	306,453	197,503	193,488	319,556	457,563
3,829,595	3,990,637	3,919,916	2,666,198	2,632,480	591,961	626,777	897,797	991,258	1,315,390
1,893,867	2,070,194	2,851,587	5,304,830	6,318,105	223,253	402,028	613,070	770,410	868,160
149,568	149,176	192,510	495,425	652,683	148,408	139,037	229,211	260,953	286,317
536,408	863,270	876,597	1,348,456	1,210,656	152,146	159,924	185,262	197,773	223,735
136,018	109,774	289,470	258,624	827,540	700,102	783,312	822,163	762,681	1,153,580
104,710	63,411	52,209[2]	214,034[2]	91,930[2]	3,528	629	7,763	3,866	16,785
1,577,240	2,079,359	2,221,357	3,215,497	4,920,235	1,915,470	2,077,409	3,110,763	3,652,785	2,420,338
18,269,597	**19,270,123**	**20 692 166[2]**	**25 981 517[2]**	**30 411 396[2]**	**6,292,986**	**6,723,013**	**8,613,364**	**9,870,710**	**9,358,956**

Alberta.					British Columbia.				
1917.	1918	1919.	1920.	1921.	1917.	1918	1919.	1920.	1921.
$	$	$	$	$	$	$	$	$	$
1,915,527	1,999,772	2,207,646	2,313,104	2,261,601	723,135	648,135	623,135	623,135	623,135
103,108	157,140	141,639	112,660	109,723	30,041	50,929	51,060	44,116	45,970
–	–	–	–	–	308,473	481,388	227,674	436,821	587,835
8,963	137,527	213,082	286,499	281,158	631,927	643,622	620,522	550,261	553,373
–	–	–	–	–	1,968,787	2,079,611	2,582,549	2,455,000	3,280,035
25,306	28,757	35,803	35,462	68,957	104,977	106,554	119,590	156,816	172,712
110,877	116,458	130,962	179,342	242,399	21,968	28,966	39,590	41,870	75,181
677,064	792,614	1,005,640	1,094,027	1,037,173	450,286	398,174	423,969	700,922	752,931
142,608	200,072	167,246	267,336	172,598	277,703	241,363	271,777	374,321	342,259
1,077,924	1,511,855	2,043,027	2,914,982	2,397,461	1,718,228	3,323,170	4,556,937	6,479,199	5,395,272
388,211	663,991	1,096,808	1,404,037	1,203,446	220,178	356,780	504,245	721,594	1,199,023
33,002	35,687	57,602	41,578	139,625	1,725	3,105	4,044	4,993	35,561
35,124	6,638	6,728	10,255	60,947	42,709	60,491	74,614	94,350	100,302
180,006	166,878	118,937	181,218	244,143	201,709	269,493	484,870	738,896	619,555
341,617	425,322	673,633	92,218	184,634	35,908	11,025	25,211	19,769	30,492
1,220,769	1,418,051	1,743,986	1,987,058	2,683,072	169,030	177,039	321,492	419,240	1,405,628
6,260,106	**7,660,762**	**9,642,739**	**10,919,776**	**11,086,937**	**6,906,784**	**8,882,845**	**10,931,279**	**13,861,603**	**15,219,264**

NOTE.—For combined receipts of all provinces see Table 27.

26.—Classified Summary Statement of Ordinary Expenditures of

Objects.	Prince Edward Island.				
	1917.	1918.	1919.	1920.	1921.
	$	$	$	$	$
Civil Government	24,814	25,362	29,988	42,677	37,102
Legislation	18,822	17,999	24,460	31,729	32,546
Agriculture	12,660	16,928	26,066	17,621	26,659
Lands	–	–	–	–	–
Mines and Mining	–	–	–	–	–
Forest, Timber and Woods	–	–	–	–	–
Game and Fisheries	–	–	–	–	–
Administration of Justice, Special Legal Administration and Inquiry	30,262	26,799	29,015	34,010	33,662
Conservation of Health and Sanitation	1,610	2,382	4,304	956	786
Public Buildings, Public Works and Enterprises	69,007	66,612	159,561	130,078	119,834
Education	176,952	170,913	183,344	209,478	246,401
Hospitals	90,038	91,361	121,385	121,866	120,559
Correctional Institutions	–	–	–	–	–
Charities	5,730	5,669	5,385	4,961	5,349
Pensions, Gratuities and Reliefs	700	700	700	992	1,408
Recreation and Amusement	–	–	–	–	–
Colonization, Immigration and Publicity	–	–	–	–	–
Refunds	4	70	400	–	–
Interest Payments	46,799	49,680	50,801	56,498	58,687
Sinking Funds	–	–	–	–	–
Miscellaneous Payments	9,715	9,941	20,000	9,908	11,049
Total Ordinary Expenditure	**487,113**	**484,416**	**655,409**	**660,774**	**694,042**

Objects.	Quebec.				
	1917.	1918.	1919.	1920.	1921.
	$	$	$	$	$
Civil Government	650,230	693,377	719,677	807,733	878,775
Legislation	495,843	482,469	666,795	585,600	591,107
Agriculture	451,744	645,274	602,800	824,200	971,000
Lands	220,776	260,526	266,756	326,707	373,090
Mines and Mining	16,500	16,500	16,500	16,500	16,500
Forest, Timber and Woods	154,395	171,909	181,761	272,114	359,900
Game and Fisheries	59,305	65,235	86,255	92,500	120,000
Administration of Justice, Special Legal Administration and Inquiry	1,451,439	1,578,850	1,577,815	1,775,321	2,068,457
Conservation of Health and Sanitation	34,954	69,313	53,386	87,185	117,448
Public Buildings, Public Works and Enterprises	1,524,898	2,127,506	2,303,996	3,032,754	3,047,031
Education	1,637,317	1,668,425	1,666,470	1,760,262	1,802,619
Hospitals	666,298	1,023,556	1,020,784	1,022,446	1,044,145
Correctional Institutions	184,936	185,000	243,665	226,500	258,271
Charities	72,385	72,445	72,945	76,025	77,245
Pensions, Gratuities and Reliefs	106,527	184,318	83,680	95,084	86,946
Recreations and Amusements	8,120	221,190	264,256	12,181	14,364
Colonization, Immigration and Publicity	55,540	52,850	74,586	71,017	71,300
Refunds	7,888	10,064	10,063	7,220	16,010
Interest Payments	1,630,926	1,656,539	1,668,563	1,802,760	2,170,330
Sinking Funds	157,711	167,057	178,211	186,036	198,156
Miscellaneous Payments	319,940	319,427	612,167	440,595	341,394
Total Ordinary Expenditure	**9,907,672**	**11,671,830**	**12,371,131**	**13,520,740**	**14,624,088**

Provincial Governments for their respective fiscal years 1917-1921.

Nova Scotia.					New Brunswick.				
1917.	1918.	1919.	1920.	1921.	1917.	1918.	1919.	1920.	1921
$	$	$	$	$	$	$	$	$	$
126,796	142,019	168,773	215,455	262,195	79,400	99,450	123,173	145,720	146,270
97,082	88,618	104,900	142,865	155,155	68,236	59,650	59,536	117,936	96,292
36,960	42,641	58,461	46,116	72,733	76,209	251,089	84,482	92,912	66,639
115	64	94	146	71	3,568	6,068	6,205	10,295	17,107
40,475	21,271	23,418	33,442	42,129	717	920	3,759	998	4,524
2,550	2,600	2,600	3,050	3,050	27,648	35,068	84,432	123,233	215,941
1,500	1,500	1,500	1,500	–	36,427	38,422	47,669	49,654	31,250
25,670	28,333	32,410	36,095	58,243	44,059	40,216	59,531	46,407	53,443
–	–	–	3,618	3,058	412	5,731	–	–	15,085
403,665	460,772	871,717	1,134,696	1,123,933	527,225	544,871	821,741	908,962	942,644
527,272	522,941	531,104	610,870	776,044	319,906	329,564	326,275	362,067	465,522
352,288	501,962	668,257	751,215	847,568	176,978	208,444	186,059	213,717	210,305
–	–	–	–	–	–	–	–	–	–
16,477	17,755	21,434	29,601	30,813	2,572	5,700	8,619	29,096	30,583
9,076	7,974	8,350	9,578	10,659	5,883	17,561	10,110	17,873	11,343
3,921	4,963	6,280	10,322	11,914	1,300	4,626	10,346	9,287	15,466
10,339	10,778	12,587	16,430	19,651	13,496	8,356	8,613	8,507	7,695
13,151	15,056	12,224	15,894	13,645	1,592	905	2,607	1,060	–
540,139	560,987	599,211	616,643	861,564	686,714	644,438	628,892	679,264	814,019
77,852	77,448	76,826	103,490	267,358	33,231	31,336	31,335	31,080	78,441
58,684	66,115	80,136	135,822	118,363	61,331	66,647	92,553	121,255	209,943
2,344,009	**2,573,797**	**3,280,282**	**3,916,848**	**4,678,140**	**2,166,904**	**2,399,062**	**2,595,937**	**2,969,323**	**3,432,512**

Ontario.					Manitoba.				
1917.	1918.	1919.	1920.	1921.	1917.	1918.	1919.	1920.	1921.
$	$	$	$	$	$	$	$	$	$
939,259	1,066,950	1,261,382	1,550,665	1,858,171	274,778	328,119	396,343	479,272	529,115
336,435	359,885	412,136	412,798	455,348	251,412	160,026	148,031	306,360	212,646
487,330	611,525	687,685	741,115	709,366	72,880	87,924	134,166	281,402	206,017
70,159	69,593	72,397	80,830	86,844	–	10,835	12,092	19,623	–
86,116	134,236	123,269	129,019	79,356	–	–	–	–	–
668,119	716,375	867,192	972,978	633,475	–	–	–	–	–
128,199	399,307	477,004	429,593	371,346	28,689	25,684	24,039	18,319	8,821
694,784	746,654	741,812	908,664	1,415,029	499,915	465,176	612,786	800,098	793,876
62,579	83,700	105,543	269,641	199,238	35,000	–	10,000	30,000	35,000
1,213,768	1,040,070	1,416,919	1,406,257	1,925,238	2,131,745	2,351,933	2,761,473	3,031,763	1,246,323
2,886,409	3,170,625	3,746,868	5,469,679	7,568,815	1,213,128	1,301,124	1,459,710	1,744,713	2,131,678
2,015,610	2,085,990	2,559,138	3,216,009	3,563,570	265,205	305,358	377,479	521,738	553,424
379,815	538,461	691,779	604,671	852,305	47,829	56,876	70,831	101,714	108,330
212,969	218,804	225,548	323,660	224,170	247,339	243,498	258,94	293,464	342,679
16,400	6,175	12,475	48,635	96,957	73,055	112,715	226,732	399,214	505,846
21,252	50,560	79,772	178,470	59,748	13,015	21,129	20,956	25,759	35,398
46,455	41,745	67,661	100,019	337,625	68,408	51,443	37,101	69,595	76,875
74,018	55,878	58,331	187,525	203,082	1,997	2,719	10,891	5,623	29,916
–	–	–	–	6,838,334	1,453,843	1,686,325	1,771,457	2,338,949	3,022,144
–	–	–	–	–	–	–	–	–	–
6,178,547	6,063,913	7,857,664	8,850,615	1,101,674	182,120	96,843	164,913	135,349	225,051
16,518,223	**17,460,404**	**21,464,575**	**25,880,843**	**28,579,688**	**5,860,355**	**7,307,727**	**8,497,942**	**10,602,975**	**10,063,139**

26.—Classified Summary Statement of Ordinary Expenditures of

Objects.	Saskatchewan.				
	1917.	1918.	1919.	1920.	1921.
	$	$	$	$	$
Civil Government	444,004	534,145	711,678	789,171	981,581
Legislation	149,901	344,443	203,975	214,131	218,697
Agriculture	159,642	131,876	119,878	208,006	576,101
Lands	42,877	1,903	31,563	51,094	40,959
Mines and Mining	–	–	–	–	–
Forest, Timber and Woods	–	–	–	–	–
Game and Fisheries	9,501	10,582	11,304	19,482	19,897
Administration of Justice, Special Legal Administration and Inquiry	1,019,806	988,649	916,183	1,107,208	1,326,496
Conservation of Health and Sanitation	–	24,416	13,666	27,184	140,190
Public Buildings, Public Works and Enterprises	855,304	1,157,986	1,147,221	1,321,738	1,821,014
Education	986,798	1,052,944	1,192,697	1,434,923	2,443,002
Hospitals	345,771	526,794	538,073	723,458	771,577
Correctional Institutions	10,571	12,561	14,905	24,831	42,011
Charities	26,980	76,396	96,308	65,484	85,668
Pensions, Gratuities and Reliefs	7,400	30,353	74,258	52,304	111,378
Recreation and Amusement	3,620	6,627	6,047	11,497	13,617
Colonization, Immigration and Publicity	–	–	–	–	–
Refunds	12,292	1,529	3,022	132,196	159,307
Interest Payments	1,067,780	1,096,466	1,222,177	1,337,754	1,620,454
Sinking Funds	74,361	75,079	192,071	187,660	186,960
Miscellaneous Payments	337,357	755,853	1,630,175	999,712	1,592,756
Total Ordinary Expenditure	**5,553,965**	**6,828,590**	**8,125,202**	**8,707,833**	**12,151,665**

27.—Combined Itemized Summary Statement of Ordinary Receipts and Expenditures

RECEIPTS.

Sources of Receipts.	Totals.				
	1917.	1918.	1919	1920.	1921.
	$	$	$	$	$
Subsidies and other Receipts from Dominion Government	12,410,772	12,731,734	13,141,921	13,738,396	13,940,101
Agriculture	248,249	632,927	382,921	315,828	332,213
Lands	805,582	963,619	990,301[2]	1,190,814[2]	1,108,478[2]
Mines and Mining	3,134,726	2,667,835	2,533,675	3,053,365	2,646,394
Woods, Forests and Timber	5,689,457	5,866,051	7,134,458[2]	9,182,293[2]	1,1077,069[2]
Game and Fisheries	621,654	924,896	1,206,472	1,444,873	1,592,073
Fines, Penalties and Forfeitures	342,611	462,264	592,265	684,428	926,118
Fees (other than succession duties)	4,146,596	4,038,030	4,564,044	5,847,838	5,805,538
Succession Duties	5,931,754	8,861,621	6,036,153	7,335,728	8,546,923
Taxation of Corporations, etc	9,108,150	12,728,624	16,205,308	19,207,699	18,360,120
Licenses and Permits	5,227,009	7,174,94	8,614,731	12,466,779	14,271,483
Education	447,241	457,066	628,745	963,584	1,361,568
Charities, Hospitals and Corrections	1,219,803	1,772,296	2,386,517	2,782,201	2,643,542
Interest	1,984,409	2,382,228	2,561,521	2,995,791	4,193,476
Refunds and Repayments	952,529	962,016	888,933[2]	593,711[2]	885,377[2]
Miscellaneous	5,719,439	6,731,807	8,987,716	10,849,695	14,339,985
Total Ordinary Receipts	**57,989,984**	**69,345,305[1]**	**76,944,307[1 2]**	**92,653,023[1]**	**102,030,458[2]**

[1] These totals are exclusive of the Motor Vehicle Tax in Prince Edward Island, which amounted in 1918 to $12,651 and in 1919 to $11,344 net, and was transferred to the Public Works Department and earmarked for highway improvement.

[2] These totals include capital revenue in Ontario to the amount of $787,394 in 1919, $903,422 in 1920 and $1,149,919 in 1921, received from the Department of Lands and Forests, and not separable into its items.

Provincial Governments for their respective fiscal years 1917-1921—concluded.

Alberta.					British Columbia.				
1917.	1918.	1919.	1920.	1921.	1917.	1918.	1919.	1920.	1921.
$	$	$	$	$	$	$	$	$	$
589,724	611,423	722,933	822,660	932,831	1,027,577	932,418	1,497,939	1,980,580	2,302,857
341,071	171,460	175,494	202,993	464,022	277,528	179,958	181,317	163,532	432,526
628,404	798,825	1,096,427	460,767	598,439	132,368	138,620	99,851	103,574	144,983
5,916	40,859	71,500	57,271	43,903	84,185	66,552	160,158	224,855	416,273
33,804	49,009	41,781	51,258	–	62,491	143,491	136,755	175,655	217,071
–	–	–	–	–	102,464	188,620	143,791	149,723	218,737
29,707	24,745	26,785	30,530	37,995	81,616	64,771	26,994	21,611	38,371
880,919	879,050	1,010,693	1,152,552	1,265,295	667,237	519,086	579,912	728,086	876,100
14,866	63,848	125,760	110,538	167,115	21,872	20,808	82,666	46,849	56,361
1,673,410	1,513,256	2,037,320	2,463,950	2,999,556	2,667,080	1,562,588	1,835,320	2,247,809	3,161,538
1,191,979	1,209,629	1,439,847	1,768,834	2,299,961	1,640,880	1,716,840	1,995,309	2,541,349	2,740,486
180,930	308,181	360,333	515,975	628,703	744,559	706,471	1,019,115	1,013,094	1,125,011
49,992	59,309	67,090	92,176	94,788	86,592	81,122	99,972	132,964	146,862
18,687	32,063	35,002	37,947	57,364	78,448	78,758	80,807	100,962	114,038
5,000	2,150	39,872	163,284	208,144	53,186	94,712	65,800	54,306	344,748
–	–	–	–	–	7,975	12,004	18,753	20,263	50,485
16,396	16,288	5,660	2,695	7,958	40,462	68,770	76,580	75,847	79,011
8,365	7,531	202,411	11,632	20,253	7,292	29,731	5,935	12,627	13,176
913,401	1,417,299	1,516,842	1,771,849	2,306,246	830,422	946,728	1,175,502	1,437,629	2,126,488
97,500	152,976	157,501	162,501	212,501	452,423	780,149	–	–	–
72,433	945,907	392,492	543,938	764,230	455,077	691,072	605,271	336,688	631,809
6,752,504	**8,303,808**	**9,525,749**	**10,423,354**	**13,109,304**	**9,531,748**	**9,023,269**	**9,887,745**	**11,568,003**	**15,236,931**

of all Provincial Governments for their respective fiscal years 1917-1921.

EXPENDITURES.

Objects.	Total.				
	1917.	1918.	1919.	1920.	1921.
	$	$	$	$	$
Civil Government	4,156,582	4,433,263	5,631,886	6,833,933	7,928,897
Legislation	2,036,330	1,864,508	1,976,644	2,177,944	2,658,339
Agriculture	2,058,197	2,724,702	2,909,816	2,775,713	3,371,937
Lands	427,596	456,400	620,767	770,821	978,247
Mines and Mining	240,100	365,427	345,482	406,872	359,580
Forest, Timber and Woods	955,170	1,114,572	1,279,776	1,521,098	1,431,103
Game and Fisheries	374,944	630,240	701,550	663,189	627,680
Administration of Justice, Special Legal Administration and Inquiry	5,314,091	5,272,813	5,560,157	6,588,441	7,890,601
Conservation of Health and Sanitation	171,293	270,206	395,325	575,971	734,281
Public Buildings, Public Works and Enterprises	11,076,103	10,825,544	13,355,274	15,678,016	16,387,111
Education	10,580,647	11,143,005	12,541,624	15,902,173	20,474,528
Hospitals	4,837,677	5,758,117	6,850,623	8,099,518	8,864,862
Correctional Institutions	759,733	933,329	1,188,242	1,182,856	1,502,564
Charities	681,587	751,088	804,988	961,200	967,909
Pensions, Gratuities and Reliefs	277,224	456,658	521,977	841,270	1,377,429
Recreation and Amusement	59,203	321,099	406,410	267,779	200,992
Colonization, Immigration and Publicity	251,096	250,230	282,788	344,110	600,115
Refunds	126,599	123,483	305,884	373,777	455,389
Interest Payments	7,170,024	8,058,462	8,633,445	10,041,343	19,818,266
Sinking Funds	893,078	1,284,045	635,944	670,767	943,416
Miscellaneous Payments	7,675,204	9,015,718	11,455,371	11,573,885	4,996,269
Total Ordinary Expenditure	**60,122,485**	**66,052,909**	**76,403,973**	**88,250,675**	**102,569,515**

28.—Assets and Liabilities of the Provincial Governments

ASSETS.

Items.	Prince Edward Island.	Nova Scotia.
	1921.	1921.
	$	$
Principal Assets:—		
(1) Dominion Government	893,390	1,781,789
(2) Investments	307,844	–
(3) Deposits	–	1,246,836
(4) Cash Balances or in Banks	–	–
(5) Utilities, Provincial Ownership	–	506,112
(6) Lands	–	–
(7) Loans and Advances	–	6,044,638
(8) Miscellaneous	–	539,028
Total Principal Assets	**1,201,234**	**10,118,403**
(9) Other Miscellaneous Assets	–	–
(10) Natural Resources	–	–

LIABILITIES.

Direct Liabilities:—		
(1) Dominion Government	–	531,060
(2) Debentures	858,000	20,678,267
(3) Bonds	–	–
(4) Stocks	–	–
(5) Treasury Bills	–	–
(6) Loans	657,184	1,000,000
(7) Bank Overdraft and Debit Balances	–	277,898
(8) Sinking Funds	–	–
(9) Miscellaneous	–	15,611
Total Direct Liabilities	**1,515,184**	**22,502,836**
(10) Indirect Liabilities	–	113,204

[1]Less Sinking Fund of $1,546,581 and 10 year 1922 Debentures of $251,256.

NOTE.—The following list of items shows the classification of accounts which are included in the above statement:—

ASSETS.

(1) DOMINION GOVERNMENT, including (a) Provincial Debt Account, (b) Land Account, (c) Housing Act, (d) Common School Fund, (e) School Land Trust Fund, (f) Annual Subsidy, (g) Grant per Capita, (h) Provincial Aid to Highways, (i) Provincial Aid Technical Education Maintenance.

(2) INVESTMENTS, including (a) Sinking Funds, (b) Inscribed Stock, (c) Victory Bonds, (d) Railway, (e) Debentures, (f) Registered Stock, (g) War Loan—Dominion, (h) Court House Bonds, (i) Farm Loans Association, (j) Land Titles Assurance Fund, (k) Miscellaneous.

(3) DEPOSITS, including (a) Sinking Funds, (b) Bank Balances, (c) Special Deposits, Trust Accounts, (d) Special Deposits, Bank Liquidation.

(4) CASH BALANCES OR IN BANKS.

(5) UTILITIES, PROVINCIAL OWNERSHIP, including (a) Telephones, (b) Grain Elevators, (c) Hydro-Electric Power, (d) Railways.

(6) LANDS, including (a) Crown Lands, amounts outstanding and Interest, (b) Former Indian Reservations, (c) Other Lands, including Soldiers' Land Act, Railway Subsidy Land repurchased and Fairview Works, Fairview, B.C., (d) Timber Dues, Bonus, etc., amounts outstanding, (e) Farm Settlement Board Land.

(7) LOANS AND ADVANCES, including (a) Co-operative Creameries, (b) Co-operative Elevator Companies, (c) Railway Loans and Interest receivable, (d) Railways, (e) Advances, Trust Accounts, etc., (f) Advances, (g) City of Regina, (h) Education County Loan, (i) Public Utilities, (j) Due from Capital to Current being amount advanced, (k) Other Loans, (l) Power Commission Temporary Loan.

(8) MISCELLANEOUS, including (a) Deferred Revenue, (b) Deferred Charges, (c) Royalties (Mining), (d) Railway earnings—accounts receivable, (e) Trust Funds—cash for railway bondholders, (f) Drainage and Judicial Districts, (g) Dyking Assessments Adjustment Act, (h) Secured Accounts, (i) Education School Book Inventory, (j) Taxes uncollected, (k) Accounts receivable and Inventories, (l) Hospitals, accounts receivable, etc., (m) Amounts available for Specific Capital Outlay, (n) Outstanding Revenue, (o) Patriotic Purposes, (p) Miscellaneous.

(9) OTHER MISCELLANEOUS ASSETS, including (a) Provincial Government Buildings and Sites, (b) Roads and Bridges, (c) Demonstration Farms, (d) Surveys, (e) Appropriation of Revenue, Cash for extinguishment of Government Stocks and Bonds, (f) Public Improvements, (g) Royal Commissions, (h) Patriotic Purposes, (i) Other Expenditures, (j) Miscellaneous.

at the close of their respective fiscal years ended in 1921.

ASSETS.

New Brunswick.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.
1921.	1921.	1921.	1921.	1921.	1921.	1921.
$	$	$	$	$	$	$
2,054,299	2,473,506	8,724,884	16,722,096	35,142,221	46,116,963	12,462,702
8,895,700	2,090,299	27,309,122	9,938,793	9,997,400	1,803,944	6,981,433
–	284,220	18,784,466	–	1,485,137	–	2,167,330
–	1,739,321	–	28,439	–	1,473,294	1,718,518
1,642,868	3,362,902	102,945,988	18,439,929	11,151,976	19,525,411	–
150,000	–	2,900,000	–	–	–	4,674,228
774,631	564,912	–	3,192,595	3,646,466	30,749,562	26,408,155
1,085,982	5,000	1,423,661	14,027.249	322,527	15,118,955	6,016,276
14,603,480	**10,520,160**	**162,088,121**	**62,349,101**	**61,745,727**	**114,788,129**	**60,428,642**
14,452,352	4,418,323	51,513,358	26,206,287	21,607,412	23,759,751	23,545,331
–	–	503,000,000	13,622,014	40,000,000	81,186,758	–

LIABILITIES.

1,705,636	2,799,110	10,750,000	–	–	–	1,509,996
14,718,852	–	–	–	36,219,999	55,022,671[1]	19,125,000
7,111,977	71,000	165,525,000	61,929,870	–	–	–
1,742,602	–	8,418,420	–	7,015,436	3,987,586[1]	17,196,936
–	–	16,000,000	2,238,188	1,791,753	–	–
–	53,652,113	–	73,151	–	5,686,553	16,618,445
1,599,930	–	–	–	272,013	–	–
832,212	–	–	4,656,258	–	1,419,957	–
2,423,364	1,814,213	4,266,270	4,157,040	629,061	4,119,936	6,149,821
30,134,573	**58,336,436**	**204,959,690**	**73,054,507**	**45,928,262**	**68,438,866**	**60,600,198**
1,117,000	4,130,500	36,882,469	31,573,102	–	–	65,407,227

(10) NATURAL RESOURCES, including (a) Pine Timber, (b) Pulpwood, Timber, Ties, Poles, Hardwood, etc., (c) Mining Lands and Profits, (d) Agricultural Lands, (e) Water Powers, (f) Sand, gravel, etc., (g) District of Patricia area 146,000 sq. miles Timber, Fisheries Fees and Mining Possibilities, (h) Unsold School lands.

LIABILITIES.

(1) DOMINION GOVERNMENT, including (a) Agricultural Aid, unexpended Balance, (b) Administration Agricultural Aids Act, (c) Housing Act Loan, (d) Dominion Subsidy Paid in Advance, (e) Balance of Account, 1902, (f) Purchase of Property Q.M. O. Railway, (g) Loans, (h) Public Health Aid unexpended Balance.

(2) DEBENTURES, including (a) Provincial, (b) Administration Farms Loans Act.

(3) BONDS, including (a) Provincial, (b) Court House, (c) Government Bonds and Stock, (d) Profit on Bond Conversion.

(4) STOCKS, including (a) Stock inscribed (London, England), (b) Registered, (c) Stocks.

(5) TREASURY BILLS.

(6) LOANS, including (a) Short Term Special, (b) Loan Account, (c) Due Bank, (d) Temporary Loans, (e) Loans (Funded Debt).

(7) BANK OVERDRAFTS AND DEBIT BALANCES.

(8) SINKING FUNDS, including (a) Replacement reserves, (b) Municipal, (c) Invested.

(9) MISCELLANEOUS, including (a) Certificates (Railway and Annuity), (b) Trust Funds and Deposits, (c) Mortgages (B.C. Building, London, England), (d) Interest, (1) on securities (2) accrued (not due), (e) Supplementary Revenue Fund, (f) School Grants, (g) Amounts Payable, (h) Licenses paid in advance, (i) Liabilities for Capital Expenditure (including Railways, Bridges, Roads, etc.), (j) Outstanding Warrants, (k) Miscellaneous.

(10) INDIRECT LIABILITIES, including (a)Guarantee of Bonds and Loans in Nova Scotia, (b) Bonds guaranteed by Province of New Brunswick, (c) Debentures and Loans for Railways, Institutions, Schools, etc., in Quebec, (d) Guarantees of Debentures for Toronto University, Niagara Falls Park, Toronto and Hamilton Highway Commission, Towns of Bruce Mines, Cochrane and Matheson, Township of Tisdale, Separate School Board, Town of Timmins and Hydro-Electric Power Commission for Ontario, (e) Principal and Interest guaranteed for C.N.R. Securities, Municipal Debentures and Manitoba Farm Loan Association Securities (in addition interest only has been guaranteed on Municipal Debentures par value $99,500, also rentals payable to N.R. Ry. Co. for certain railways leased) in Manitoba, (f) Guarantees of Principal and Interest on Securities, Railways, Sewerage and Drainage Board, Dyking Districts, War Reduction Co. and Agricultural Credits Commission in province of British Columbia.

3.—Municipal Public Finance.

The statistics of the rural and urban population of Canada appearing on pages 167 to 175 of this issue of the Year Book, show that between 1901 and 1921, the urban population of Canada more than doubled, increasing from 2,014,222 to 4,352,442; further, this growth has been greater in the cities, more especially the larger cities, than in the towns and villages. The aggregation of great numbers of people into the cities within a comparatively short space of time has made it necessary for costly public services to be furnished to the new-comers. Problems of water supply, road and bridge building, police and fire protection, sanitation and sewage, transportation, education, public health and recreation have been faced and more or less satisfactorily solved, often at great expense. Some municipalities, indeed, in the period before the war, considered it expedient to provide public services for prospective, as well as for existing population, and later found that the prospects did not become actualities as rapidly as they had expected. The result of the great actual growth and the great expectations of growth was a rapid increase in municipal taxation which has made municipal public finance a very important part of the public finance of Canada, attracting a very considerable amount of attention from theoretical students of public finance, from municipal officials, from bond houses and generally from the urban ratepayer.

Investigators of municipal public finance have, however, found great difficulties in pursuing their studies on account of the incomparability of the statistics collected by Provincial Governments, or the entire absence of such statistics, for as late as 1919 only six provinces compiled and published their municipal statistics. Accordingly, in response to suggestions from the Union of Canadian Municipalities and the Municipal Improvement League of Canada, the Dominion Bureau of Statistics undertook to collect independently through its Finance Branch the statistics for a fixed group of municipalities, of 10,000 population or over, according to schedules and methods of compilation approved by the provinces. The results of the first investigation for the calendar year 1919 were published in summary form on pages 570 to 580 of the 1920 Year Book, as well as in greater detail in a special report.

Statistics of Urban Municipalities of 10,000 Population and over.—In the present issue of the Year Book the statistics for 1920 of Canadian cities of 10,000 population and over are printed in considerable detail, a summary of the more important statistics being given by provinces and for the whole country in Table 29, which shows that the 57 cities included in the report had in that year taxable land and buildings assessed at $2,858,792,013, and tax-exempt land and buildings assessed at $686,365,646. Their ordinary receipts aggregated $168,840,791, of which $94,407,640 were derived from taxation, being $33.38 per head of the census population; their extraordinary receipts were $41,679,649, a total of $210,520,440, while their grand total expenditure was $210,692,260. Available and revenue-producing assets amounted to $389,148,881, and total assets to $809,861,298, while total liabilities were $675,610,499. For individual cities, statistics of receipts are given in Table 31, of expenditures in Table 30, of assets and liabilities in Table 32.

Statistics of Urban Municipalities of from 3,000 to 10,000 Population.—According to the statistics compiled and published by the Finance Branch of the Dominion Bureau of Statistics for urban municipalities with a population of from 3,000 to 10,000, the 103 municipalities of this class reporting had in the calendar year 1919 an estimated population of 552,668. The aggregate value of taxable

property was in that year $280,294,473, and of property exempted from taxation $108,239,833. The total ordinary receipts of these 103 municipalities were $15,309,562, of which $9,380,217 were derived from taxes, being $16.97 per head of the estimated population. The extraordinary receipts were $4,476,454, bringing the total receipts up to $19,786,016. The aggregate ordinary expenditures were $15,185,026, and extraordinary expenditures $5,209,136, a grand total of $20,394,162. The aggregate available assets were $58,751,680, and the aggregate liabilities $55,719,413. A summary by provinces of the statistics of principal interest will be found on pages 802 and 803 (Table **33**.)

Statistics of Smaller Urban Municipalities of 1,000 to 3,000 Population.—Statistics have been compiled and published for 1920 by the Finance Branch of the Dominion Bureau of Statistics for 241 towns and villages having an estimated population in that year of between 1,000 and 3,000, and an aggregate estimated population of 419,197. The aggregate value of the taxable property in these municipalities in 1920 was $227,073,141, and of property exempted from taxation $49,295,401. The total ordinary receipts of the 241 municipalities were $10,684,795, of which $7,375,876 were from taxation, or $17.59 per head of the estimated population; the total extraordinary receipts were $5,448,828, bringing the total receipts (including $35,306 not classified as ordinary or extraordinary) to $16,168,929. Aggregate ordinary expenditures were $11,318,446, and extraordinary expenditures $4,848,882, making the grand total expenditure (including $32,661 not classified) $16,199,989. Aggregate available assets were $37,718,155, and aggregate liabilities $33,407,404. A summary by provinces of the statistics of principal interest will be found on pages 804 and 805 (Table **34**.)

Comparisons of Finances of Larger and Smaller Municipalities—The general basis of municipal finance in Canada is the assessed value of taxable property. On the basis of the above-mentioned reports, this amounted in the cities to $981.75 per head, in the larger towns to $507.17 and in the smaller towns and villages to $541.69 per head of population.

Receipts from compulsory taxation per head of population were in the cities $27.34, in the larger towns $16.97, in the smaller towns and villages $17.60. Total ordinary receipts amounted to $45.48, $27.70 and $25.49 per head of population respectively, and extraordinary receipts to $17.55, $8.10 and $13.00 respectively.

Ordinary expenditures per head of population were in the cities $43.06, in larger towns $27.48 and in smaller towns and villages $27.00; extraordinary expenditures were $18.01, $9.43 and $11.57 per head respectively.

Assets per head of population were $151.72 in the cities, $106.31 in the larger towns and $89.98 in the smaller towns and villages. Liabilities per head were $202.44 in the cities, $100.82 in the larger towns and $79.69 in the smaller towns and villages.

NOTE.—According to the census of 1921, 55 cities in Canada had at that time a population of 10,000 or over. The municipal authorities of Amherst, Dartmouth and New Glasgow, all in Nova Scotia, and of Oshawa and North Bay in Ontario, had previously estimated their populations as being 10,000 or over; they were classified as such in the 1919 report and are here retained for comparative purposes. Three urban municipalities having more than 10,000 population by the census, failed to send in a report and are not included, viz., Guelph, Glace Bay and Shawinigan Falls.

29.—Summary by Provinces of Municipal Statistics of Principal Interest of

Items.	Prince Edward Island.	Nova Scotia.	New Brunswick.
Number of Cities reporting in each province	1	5	3
General Statistics—			
Area in acres	850	15,343	32,925
Population (Census 1921)	12,347	107,788	72,768
Value of Taxable Property (land and buildings) $	5,762,560	72,983,115	48,611,949
Value of Exemptions (land and buildings) $	1,000,000	33,472,800	14,157,000
Incomes assessed for Municipal Income Tax $	[1]	812,850	24,983,384
Business assessment $	[1]	2,014,110	10,332,450
Streets improved, mileage of	9	139	38·41
Streets unimproved, mileage of	10	138·75	56
Length of streets lighted	19	108	75·4
Sidewalks, mileage of	24	158·55	134·43
Sewers, mileage of	30	132	85·66
Water mains, mileage of	22	199·6	146·78
Parks and playgrounds, acreage of	40	382·3	79
Estimated value of fire equipment $	15,000	431,647	155,019
Total loss of property by fire $	[2]	600,650	423,192
Receipts from—			
Taxation $	118,858	1,677,441	2,007,127
Licenses and fees $	7,839	59,175	38,626
Fines, forfeits and escheats $	2,392	74,006	22,284
Municipally owned public service $	16,242	478,258	577,693
Grants, subventions and fees for educational purposes $	[1]	30,609	1,000
Interest $	[1]	9,592	8,774
Sinking funds $	[1]	36,340	89,799
Total ordinary receipts $	147,481	3,987,460	3,133,173
Total extraordinary receipts $	98,253	182,086	823,719
Grand total receipts $	**245,734**	**4,169,546**	**3,956,892**
Expenditures on—			
General government $	11,521	144,550	161,385
Police department $	11,312	169,445	147,276
Fire department $	6,859	186,852	192,708
Inspection of building, plumbing, etc $	128	4,800	2,071
Highways, including administration, salaries and outlays $	24,355	460,090	683,460
Health and sanitation $	1,138	348,589	95,041
Charities and corrections $	1,650	213,520	132,109
Education $	32,153	665,645	624,472
Public service enterprises $	5,318	603,030	406,293
Recreations $	1,391	6,831	31,896
Interest $	35,335	490,798	301,516
Sinking funds $	17,407	430,847	200,483
Total ordinary expenditure $	150,249	3,888,209	3,281,096
Total extraordinary expenditure $	98,253	730,875	315,603
Grand total expenditure $	**248,502**	**4,619,084**	**3,596,699**
Assets—			
Available $	141,505	3,535,395	2,247,271
Revenue producing $	302,000	4,837,730	6,720,063
Non-revenue producing $	960,174	7,842,484	3,201,713
Other $	[1]	44,483	40,545
Total assets $	**1,403,679**	**16,260,092**	**12,209,592**
Liabilities—			
Bonded debt $	924,600	12,414,460	8,256,728
Floating or current debt $	[1]	322,293	442,069
All other $	351,438	52,353	179,086
Total liabilities $	**1,276,038**	**12,789,112**	**8,877,883**

Cities of 10,000 Population and over for the calendar year 1920.

Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.	Canada, Total.
11	24	3	3	4	3	57
60,017	112,596	32,756	26,667	72,329	22,860	376,343
876,274	1,158,442	207,305	79,456	142,857	170,439	2,827,676
891,770,301	1,018,089,000	266,331,944	87,905,620	177,249,184	290,088,340	2,858,792,013
297,884,462	206,531,479	48,108,498	22,717,700	19,413,990	43,079,717	686,365,646
[1]	71,410,029	[1]	1,245,614	3,436,644	[1]	101,888,521
[1]	82,546,688	[1]	7,006,483	[1]	[1]	101,899,731
623·1	1,263·76	258·25	118·23	251·82	385·47	3,087·04
579·56	1,036·31	575	405·57	916·21	209·77	3,927·17
930·51	1,964·37	428·25	201·2	76	452·75	4,255·48
1,176·85	2,623·53	627·49	256·64	561·46	421·31	5,984·26
870·13	1,684·95	318·8	170·9	429·45	378·22	4,100·14
796·98	1,946·91	357·45	190·7	445·85	489·66	4,595·93
3,152·42	4,691·7	754·03	918·5	1,772·35	1,065·72	12,856·04
1,384,418	1,604,063	456,375	264,873	509,871	374,194	5,195,460
1,200,803	5,538,775	958,806	263,698	553,660	504,299	10,343,883
22,345,511	40,742,821	7,117,371	3,941,951	8,611,210	7,845,350	94,407,640
1,117,282	1,356,741	338,296	121,536	141,424	472,210	3,653,139
298,749	733,651	49,708	25,218	30,945	236,823	1,473,773
4,595,776	11,244,432	1,833,701	2,471,715	6,242,447	1,051,258	28,511,522
[1]	564,596	[1]	25,857	[1]	399,878	1,021,940
969,850	779,674	72,374	36,886	700	353,805	2,231,655
1,370,940	12,821,276	121,341	119,544	[1]	[1]	14,559,240
32,658,360	84,155,827	11,338,945	7,481,231	15,259,741	10,678,573	168,840,791
15,485,378	23,708,052	674,945	341,182	100,000	266,033	41,679,649
48,143,739	**107,863,879**	**12,013,890**	**7,822,413**	**15,359,741**	**10,944,103**	**210,520,440**
3,481,285	3,454,272	354,905	337,737	672,164	391,921	9,009,740
2,069,558	2,618,442	421,183	197,210	441,075	679,863	6,755,364
2,245,781	3,492,423	507,652	369,793	489,066	634,445	8,125,579
47,880	237,789	28,132	12,931	28,718	21,287	383,736
5,754,543	10,486,314	516,856	369,593	843,632	1,065,217	20,204,060
1,457,789	4,785,705	443,141	341,152	294,264	354,858	8,121,677
438,339	2,597,168	507,560	247,860	324,968	386,766	4,849,940
5,606,061	15,438,961	2,609,858	1,544,805	2,715,118	2,080,085	31,317,158
3,868,840	10,330,311	1,809,259	2,419,021	6,442,030	482,521	26,366,623
267,389	2,329,100	187,158	65,257	151,483	173,929	3,214,434
8,828,532	8,688,476	966,229	1,247,798	1,293,225	2,918,611	24,770,513
1,366,615	13,301,681	397,605	484,973	316,381	1,189,377	17,705,369
36,551,915	84,328,164	9,875,916	7,750,634	14,228,229	10,829,443	170,883,855
11,559,108	23,926,540	1,230,792	385,104	1,300,188	261,942	39,808,405
48,111,023	**108,254,704**	**11,106,708**	**8,135,738**	**15,528,417**	**11,091,385**	**210,692,260**
36,269,604	72,814,844	22,761,651	12,592,719	27,236,695	25,252,741	202,852,418
39,022,249	70,038,502	21,949,281	11,638,388	19,238,467	12,549,783	186,296,463
84,112,018	147,665,266	36,148,537	17,232,048	31,901,040	42,141,253	371,204,533
31,399,106	11,722,380	1,783,036	[1]	1,499,024	3,019,310	49,507,884
190,802,977	**302,240,992**	**82,642,505**	**41,463,148**	**79,875,226**	**82,963,087**	**809,861,298**
159,633,996	199,959,782	51,614,069	27,255,644	55,857,590	59,471,712	575,388,587
12,286,736	7,869,211	5,953,888	2,803,105	10,122,898	7,112,653	46,912,853
10,793,090	25,471,110	6,178,211	3,134,246	2,765,626	3,252,387	52,177,547
182,713,822	**234,431,615**[3]	**63,746,168**	**33,192,995**	**68,746,114**	**69,836,752**	**675,610,499**[3]

[1] None. [2] No record. [3] The city of Chatham shows total liabilities only; these are included in this item.

30.—Expenditures, ordinary and extraordinary, of Cities

No.	Name of City or Town.	Ordinary Expenditure.						
		General Government.	Police Department.	Fire Department.	Inspection of buildings, plumbing, etc.	Highways.	Health and sanitation.	Charities and corrections.
		$	$	$	$	$	$	$
	Prince Edward Island—							
1	Charlottetown	11,521	11,312	6,859	128	24,355	1,138	1,650
	Nova Scotia—							
2	Halifax	53,268	109,590	130,049	[1]	224,721	327,653	157,772
3	Sydney	25,200	41,000	30,000	4,800	120,100	7,000	16,000
4	Amherst	24,565	6,508	8,540	[1]	22,837	7,351	27,470
5	New Glasgow	26,299	7,057	9,169	[1]	61,481	3,878	7,041
6	Dartmouth	15,218	5,290	9,094	[1]	30,951	2,707	5,237
	New Brunswick—							
7	St. John	123,644	107,506	144,392	[1]	403,802	44,183	101,040
8	Moncton	21,423	25,460	38,181	2,071	188,790	35,822	23,540
9	Fredericton	16,318	14,310	10,135	[1]	90,868	15,036	7,529
	Quebec—							
10	Montreal	2,780,136	1,742,951	1,650,203	29,880	4,349,050	1,217,873	311,124
11	Quebec	211,064	140,351	288,286	13,996	289,474	42,482	60,378
12	Verdun	24,270	22,306	33,459	1,500	36,358	35,561	5,012
13	Hull	20,948	31,857	58,486	[1]	116,761	9,804	11,546
14	Sherbrooke	47,313	19,430	39,137	[1]	69,810	9,796	20,798
15	Three Rivers	87,889	28,334	38,541	1,000	92,431	39,050	12,240
16	Westmount	80,182	35,086	40,938	[1]	267,780	8,004	708
17	Lachine	44,520	20,995	15,299	[1]	82,075	24,271	9,679
18	Outremont	153,066	21,426	20,799	1,504	237,333	51,661	1,859
19	St. Hyacinthe	18,212	6,822	15,607	[1]	71,694	19,032	4,695
20	Lévis	13,685	[3]	45,026	[1]	141,777	255	300
	Ontario—							
21	Toronto	1,517,428	1,609,888	1,994,883	198,078	4,988,738	2,649,609	969,183
22	Hamilton	720,044	249,058	253,524	13,219	641,856	415,645	676,072
23	Ottawa	138,954	181,710	272,317	1,800	480,357	436,634	269,926
24	London	114,655	103,028	145,809	[4]	562,817	308,440	175,725
25	Windsor	46,985	79,129	88,435	2,852	125,067	19,121	17,543
26	Brantford	114,310	58,957	76,496	[1]	201,581	80,132	121,963
27	Kitchener	17,870	11,779	58,520	300	258,277	52,509	7,973
28	Kingston	51,004	24,390	32,795	[1]	194,526	45,491	28,573
29	Sault Ste. Marie	46,603	43,075	48,376	1,500	94,084	35,523	29,362
30	Peterborough	41,077	24,544	37,889	1,271	380,187	51,051	24,968
31	Fort William	189,364	30,474	64,960	3,036	134,380	20,797	53,894
32	St. Catharines	62,354	20,585	45,037	1,406	146,796	36,460	26,898
33	Stratford	14,383	17,079	47,612	1,537	143,210	75,945	12,399
34	St. Thomas	47,811	19,523	19,473	1,744	307,753	44,381	16,983
35	Port Arthur	74,781	27,571	69,955	2,413	79,160	40,658	28,459
36	Sarnia	26,345	23,930	27,390	1,500	261,047	54,102	17,137
37	Niagara Falls	28,559	20,728	46,787	[1]	280,258	70,345	13,239
38	Chatham	20,011	11,357	34,498	[1]	58,219	9,708	11,309
39	Galt	51,613	9,070	29,754	[1]	139,930	48,083	60,453
40	Belleville	43,474	14,666	17,705	7,133	445,893	12,235	5,123
41	Owen Sound	15,424	9,793	25,165	[1]	137,047	12,177	5,310
42	Oshawa	28,102	12,183	9,648	[1]	278,609	115,613	1,396
43	North Bay	19,421	9,479	16,348	[1]	78,320	28,330	7,232
44	Woodstock	23,700	6,446	29,047	[1]	68,207	122,686	16,048
	Manitoba—							
45	Winnipeg	274,079	376,011	404,015	25,634	424,082	379,570	469,772
46	Brandon	32,790	21,291	55,286	1,302	37,893	32,344	20,292
47	St. Boniface	48,036	23,881	48,351	1,196	54,881	31,227	17,496
	Saskatchewan—							
48	Regina	165,476	105,614	147,670	5,490	139,902	159,690	54,789
49	Saskatoon	99,000	50,722	122,898	6,445	94,397	107,486	132,335
50	Moose Jaw	73,261	40,874	99,225	996	135,294	73,976	60,736
	Alberta—							
51	Calgary	357,346	151,772	244,894	18,556	418,303	199,590	98,262
52	Edmonton	199,114	247,600	162,767	8,509	347,235	33,482	183,126
53	Lethbridge	64,147	20,296	40,870	1,653	48,896	26,468	21,346
54	Medicine Hat	51,557	21,407	40,535	[1]	29,198	34,724	22,234
	British Columbia—							
55	Vancouver	270,871	544,614	432,955	12,962	761,009	192,817	335,002
56	Victoria	87,170	110,845	151,396	3,150	200,045	145,320	31,217
57	New Westminster	33,880	24,404	50,094	5,175	104,163	16,721	20,547

[1]None. [2]Under the control of the school board. [3]Included in fire department. [4]Plumbing inspection included in health department administration. [5]This total includes miscellaneous items of ordinary expenditure not shown elsewhere.

of 10,000 Population and over for the calendar year 1920.

Ordinary Expenditure.						Total extra-ordinary.	Grand Total, all expenditures.	No.
Education.	Municipally owned public services.	Recreations.	Interest.	Sinking Fund.	Total ordinary expenditure.[5]			
$	$	$	$	$	$	$	$	
32,153	5,318	1,391	35,335	17,407	150,249	98,253	248,50	1
401,096	308,546	[1]	293,637	332,290	2,395,799	611,439	3,007,238	2
120,600	25,000	2,500	88,000	32,500	579,700	[1]	579,700	3
42,250	15,586	2,100	46,284	40,725	272,486	90,986	363,472	4
35,009	40,096	[1]	45,781	19,543	257,866	14,250	272,11	5
66,690	213,802	2,231	17,096	5,789	382,358	14,200	396,558	6
412,383	359,431	23,441	222,887	155,791	2,305,188	7,581	2,312,769	7
140,314	2,299	6,855	50,98	41,571	662,744	223,213	885,957	8
71,775	44,563	1,600	27,647	3,121	313,164	84,809	397,973	9
5,185,689	2,658,744	191,937	6,884,686	711,650	28,468,187	5,523,059	33,991,24	10
407,931	91,559	14,704	649,161	75,152	2,284,533	2,766,936	5,051,468	11
[2]	121,88	2,414	183,963	38,500	505,225	93,091	598,316	12
[2]	92,261	1,322	125,082	49,453	524,449	50,752	575,201	13
1,830	190,593	2,254	186,044	38,930	628,813	1,634,479	2,263,292	14
[2]	190,569	11,981	255,067	70,418	848,778	1,217,328	2,066,10	15
10,611	244,837	27,074	160,041	309,601	1,397,621	22,788	1,420,40	16
[2]	80,240	3,137	142,849	23,490	449,294	215,373	664,667	17
[2]	[1]	9,271	153,78	44,65	797,033	[1]	797,033	18
[2]	94,493	3,295	61,643	1,763	309,135	11,83	320,974	19
[2]	103,662	[1]	26,214	3,006	338,842	23,469	362,311	20
7,115,435	3,548,923	1,884,757	4,485,045	8,665,074	44,539,987	6,685,48	51,225,47	21
1,365,046	975,679	50,515	765,33	601,364	6,735,833	2,378,71	9,114,549	22
1,124,584	912,773	44,058	807,913	178,289	4,849,315	29,250	4,878,565	23
881,154	307,503	34,694	360,595	762,369	4,222,510	5,671,930	9,894,440	24
805,041	477,692	33,507	190,421	9,341	2,251,289	548,754	2,800,043	25
256,657	452,222	11,532	128,413	82,621	1,584,884	110,534	1,695,418	26
165,39	208,474	15,751	4,266	[1]	801,158	159,873	961,031	27
316,794	395,272	4,603	99,789	40,173	1,233,410	332,738	1,566,148	28
506,613	224,719	29,115	142,925	105,282	1,366,249	792,484	2,158,733	29
453,620	225,944	6,595	93,946	71,777	1,414,698	342,702	1,757,400	30
497,419	446,186	3,347	352,489	150,000	2,164,386	1,177,659	3,342,04	31
267,359	182,869	7,045	179,345	2,036,188	3,225,718	907,099	4,132,817	32
136,126	40,785	33,500	174,974	131,781	941,396	356,161	1,297,557	33
164,490	552,641	14,879	75,997	3,38	1,280,359	81,667	1,362,026	34
206,752	78,027	12,058	313,317	81,212	1,066,324	1,491,404	2,557,728	35
210,094	270,509	73,208	112,177	402	1,080,793	547,924	1,628,717	36
220,058	233,356	1,610	8,693	[1]	932,406	607,53	1,539,94	37
123,456	181,172	3,507	72,116	[1]	531,416	481,691	1,013,107	38
115,257	162,649	14,276	81,001	31,345	772,228	135,000	907,228	39
101,603	106,777	4,457	66,753	109,401	936,05	153,750	1,089,80	40
106,305	9,986	6,716	43,119	216,521	601,815	499,49	1,101,307	41
115,973	182,822	34,311	35,190	[1]	861,656	139,076	1,000,739	42
103,928	27,202	1,472	46,244	[1]	339,311	75,908	415,219	43
79,758	126,129	3,587	48,416	25,159	594,971	219,703	814,674	44
2,236,603	1,648,634	179,300	537,173	140,075	8,082,038	363,837	8,445,875	45
158,255	122,778	7,197	156,659	136,189	881,807	[1]	884,807	46
215,000	37,847	661	272,390	121,341	909,071	866,955	1,776,026	47
679,949	1,009,985	27,827	573,087	263,361	3,332,840	240,556	3,573,396	48
544,127	803,954	25,188	467,258	146,892	2,713,206	88,000	2,801,206	49
320,729	605,082	12,242	207,453	74,720	1,704,588	56,548	1,761,136	50
1,064,532	2,841,198	88,506	675,857	219,391	6,487,802	8,120	6,495,922	51
1,287,910	3,044,390	34,348	302,794	[1]	5,916,537	1,258,561	7,175,098	52
159,229	391,090	20,160	75,605	22,489	897,327	[1]	897,327	53
203,447	165,352	8,469	238,969	74,501	926,563	33,507	960,070	54
1,439,949	233,054	103,800	1,760,033	855,313	7,055,468	[1]	7,055,468	55
424,378	173,620	61,022	868,055	234,512	2,733,136	101,942	2,835,078	56
215,758	75,847	9,107	290,523	99,552	1,040,839	160,000	1,200,839	57

31.—Receipts, ordinary and extraordinary, of Cities of 10,000 Population and over for the calendar year 1920.

Name of City or Town.	Ordinary Receipts.			Total ordinary receipts.[2]	Total extra-ordinary receipts, debentures, bonds, etc.	Grand Total, ordinary and extra-ordinary receipts.
	Taxation.	Licenses and fees.	Public services.			
	$	$	$	$	$	$
Prince Edward Island—						
Charlottetown	118,858	7,839	16,242	147,481	98,253	245,734
Nova Scotia—						
Halifax	837,840	32,695	164,266	2,422,429	[1]	2,422,429
Sydney	411,660	11,300	56,100	579,120	136,000	715,120
Amherst	178,579	568	29,761	346,986	16,336	363,322
New Glasgow	131,594	13,444	40,479	242,367	29,750	272,117
Dartmouth	117,768	1,168	187,652	396,558	[1]	396,558
New Brunswick—						
St. John	1,431,861	35,689	518,760	2,155,491	495,698	2,651,189
Moncton	379,663	[1]	22,879	592,899	311,511	904,410
Fredericton	195,603	2,937	36,054	384,783	16,510	401,293
Quebec—						
Montreal	17,934,148	909,977	2,713,490	24,444,955	9,956,756	34,401,711
Quebec	1,714,601	45,190	486,607	2,329,562	2,129,134	4,458,696
Verdun	376,457	22,820	179,552	700,922	56,467	757,389
Hull	177,233	16,027	137,135	384,365	197,502	581,867
Sherbrooke	284,106	39,700	410,290	1,478,278	975,479	2,453,757
Three Rivers	316,919	31,924	115,454	596,472	1,469,634	2,066,106
Westmount	713,491	18,188	300,045	1,185,368	235,041	1,420,409
Lachine	269,140	11,889	110,551	567,635	133,440	701,075
Outremont	402,500	4,593	[1]	486,456	193,570	680,026
St. Hyacinthe	85,809	11,239	70,008	299,136	21,838	320,974
Lévis	71,107	5,735	72,644	185,211	116,518	301,729
Ontario—						
Toronto	21,237,193	1,036,481	4,038,455	41,479,747	7,369,127	48,848,874
Hamilton	3,433,765	133,161	1,184,035	7,877,426	1,391,228	9,268,654
Ottawa	3,227,240	53,403	734,790	4,568,895	2,237,896	6,806,791
London	1,823,685	23,776	302,310	3,134,810	6,794,873	9,929,683
Windsor	1,245,357	16,756	569,174	1,965,015	892,531	2,857,546
Brantford	939,483	6,369	466,946	1,580,363	144,986	1,725,349
Kitchener	563,524	3,697	459,185	1,035,032	[1]	1,035,032
Kingston	530,310	1,382	358,933	1,021,745	327,500	1,349,245
Sault Ste. Marie	648,890	6,760	230,220	1,497,777	654,538	2,152,315
Peterborough	577,082	6,451	218,150	1,057,341	726,401	1,783,742
Fort William	1,182,181	8,739	559,655	2,825,057	527,894	3,352,951
St. Catharines	733,621	8,653	217,988	3,959,653	201,524	4,161,177
Stratford	473,245	4,136	30,841	1,190,900	106,422	1,297,322
St. Thomas	514,552	2,947	637,709	1,235,225	63,740	1,298,965
Port Arthur	708,014	6,846	184,511	2,505,175	4,699	2,509,874
Sarnia	431,388	4,763	254,673	1,080,390	593,466	1,673,856
Niagara Falls	368,978	5,988	221,045	1,230,447	306,614	1,537,061
Chatham	426,116	2,936	66,838	790,740	139,302	930,042
Galt	377,381	2,737	179,711	618,620	204,781	823,401
Belleville	336,667	4,749	90,651	925,083	173,405	1,098,488
Owen Sound	275,757	2,695	17,518	989,160	89,460	1,078,620
Oshawa	193,659	3,346	59,616	647,387	354,623	1,002,010
North Bay	246,530	5,057	40,240	348,535	66,684	415,219
Woodstock	248,203	4,913	121,238	591,304	336,358	927,662
Manitoba—						
Winnipeg	5,943,773	332,331	1,650,199	8,230,359	600,000	8,830,359
Brandon	662,654	[1]	150,012	893,816	[1]	893,816
St. Boniface	510,944	5,965	33,490	2,214,770	74,945	2,289,715
Saskatchewan—						
Regina	1,759,281	21,305	1,093,905	3,440,409	240,487	3,680,896
Saskatoon	1,303,733	83,322	916,632	2,518,262	100,695	2,618,957
Moose Jaw	878,937	16,909	461,178	1,522,560	[1]	1,522,560
Alberta—						
Calgary	3,560,556	66,009	2,553,714	6,194,304	[1]	6,194,304
Edmonton	3,980,495	61,517	2,960,675	7,213,431	[1]	7,213,431
Lethbridge	501,763	6,476	355,232	874,723	[1]	874,723
Medicine Hat	568,396	7,432	372,826	977,283	100,000	1,077,283
British Columbia—						
Vancouver	5,389,097	379,609	520,328	6,989,739	[1]	6,989,739
Victoria	1,910,019	79,829	343,399	2,671,429	158,053	2,829,482
New Westminster	546,234	12,773	187,531	1,017,405	107,980	1,125,385

[1]None. [2]This total includes items of ordinary receipts not shown elsewhere in this summary table.

32.—Assets and Liabilities of Cities of 10,000 Population and over, for the calendar year 1920.

Name of City or Town.	Total available assets.	Total revenue producing assets.	Total non-revenue producing assets.	Total assets.[1]	Liabilities.		
					Bonded debt.	Floating or current debt.	Total liabilities.[2]
	$	$	$	$	$	$	$
Prince Edward Island—							
Charlottetown	141,505	302,000	960,174	1,403,679	924,600	[3]	1,276,038
Nova Scotia—							
Halifax	1,995,471	2,663,675	4,681,657	9,340,803	7,208,516	27,949	7,236,465
Sydney	707,054	651,715	1,355,000	2,713,769	2,368,000	125,000	2,533,000
Amherst	341,999	334,559	641,027	1,362,068	1,006,000	77,473	1,095,826
New Glasgow	379,424	485,000	632,300	1,496,724	977,450	12,631	990,081
Dartmouth	111,447	702,781	532,500	1,346,728	854,500	79,240	933,740
New Brunswick—							
St. John	1,627,465	5,046,534	1,395,704	8,069,703	5,595,821	2,756	5,598,577
Moncton	396,019	1,399,907	1,258,148	3,086,619	2,181,108	323,440	2,683,031
Fredericton	223,787	273,622	547,861	1,053,270	479,799	115,873	596,275
Quebec—							
Montreal	26,953,192	23,848,765	57,528,620	139,562,852	119,759,310	8,708,495	135,097,285
Quebec	2,379,288	5,420,107	8,090,443	15,889,838	14,898,167	418,990	15,362,301
Verdun	534,238	1,263,584	2,839,453	4,637,275	3,186,500	383,524	3,570,024
Hull	370,449	1,287,704	1,108,610	2,766,763	2,268,125	328,498	2,616,623
Sherbrooke	1,952,274	3,346,833	1,083,590	6,382,697	3,903,400	389,722	4,780,465
Three Rivers	833,175	1,043,238	3,419,336	5,295,749	4,287,000	455,956	5,295,749
Westmount	1,649,957	825,121	4,495,205	7,137,114	4,330,167	275,614	7,137,114
Lachine	346,571	851,402	1,835,195	3,033,168	2,548,000	127,616	2,692,635
Outremont	864,920	[3]	2,748,562	3,613,482	2,850,000	276,611	3,613,482
St. Hyacinthe	140,385	593,665	767,086	1,501,136	593,358	849,519	1,443,459
Lévis	245,155	541,830	195,918	982,903	1,009,969	72,191	1,104,685
Ontario—							
Toronto	37,351,972	31,677,533	88,284,413	157,313,918	103,832,356	1,270,687	111,451,598
Hamilton	5,052,080	6,115,130	11,325,803	29,771,941	13,843,759	1,622,276	24,039,199
Ottawa	11,380,331	5,224,947	8,714,601	25,346,155	18,346,701	[3]	21,994,839
London	1,766,147	3,947,295	2,233,726	11,525,416	8,022,803	15,000	9,433,214
Windsor	391,385	1,674,509	4,848,858	6,914,752	3,956,543	279,911	4,888,395
Brantford	1,532,288	1,340,503	2,331,363	5,204,154	4,059,512	585,356	4,644,868
Kitchener	49,905	1,357,564	1,186,198	2,593,667	2,063,789	140,000	2,203,789
Kingston	455,317	1,365,206	442,514	2,263,037	2,064,234	[3]	2,215,891
Sault Ste. Marie	903,319	883,026	2,670,454	4,599,928	3,293,297	464,967	4,487,696
Peterborough	1,306,931	1,121,464	1,746,032	4,174,427	3,094,582	26,232	3,421,360
Fort William	3,566,866	3,219,037	5,141,278	11,927,181	10,983,331	714,661	11,697,992
St. Catharines	1,448,454	1,392,068	3,940,764	7,469,825	4,971,589	378,988	5,705,043
Stratford	1,114,652	993,481	1,022,500	3,130,633	2,317,305	248,000	2,568,123
St. Thomas	276,715	1,171,390	1,175,050	2,623,155	1,384,079	123,530	1,507,609
Port Arthur	2,321,990	3,247,565	4,350,608	9,920,163	7,598,173	136,281	9,848,135
Sarnia	885,259	979,073	562,612	2,426,944	1,534,174	409,866	2,426,944
Niagara Falls	107,183	663,600	1,650,670	2,421,453	1,130,425	543,356	1,673,781
Chatham	161,606	532,500	894,154	1,595,520	[7]	[7]	1,131,512
Galt	574,782	1,009,655	469,352	2,053,789	1,853,307	54,062	1,951,818
Belleville	583,414	281,802	1,629,215	2,494,431	1,424,216	429,822	2,494,432
Owen Sound	1,021,943	690,460	958,343	2,670,746	1,234,969	283,000	1,517,969
Oshawa	69,588	439,450	732,410	1,241,448	900,336	38,610	972,331
North Bay	95,535	209,896	707,559	1,012,990	788,273	104,606	893,048
Woodstock	397,182	501,348	646,789	1,545,319	1,262,029	[3]	1,262,029
Manitoba—							
Winnipeg	18,516,679	20,193,598	29,451,465	69,944,778	43,514,929	4,211,421	53,575,188
Brandon	1,787,197	1,145,299	2,140,796	5,073,292	3,549,246	111,034	3,989,653
St. Boniface	2,457,775	610,384	4,556,276	7,624,435	4,549,894	1,631,433	6,181,327
Saskatchewan—							
Regina	5,198,152	5,181,615	8,284,389	18,664,156	12,230,225	635,562	13,575,884
Saskatoon	3,335,316	4,017,414	6,058,008	13,410,738	8,932,518	1,189,174	12,537,029
Moose Jaw	4,059,244	2,439,359	2,889,651[5]	9,388,254	6,092,901	978,369	7,080,082
Alberta—							
Calgary	9,873,470	7,948,663[4]	11,036,222[6]	28,858,355	22,856,162	3,242,724	26,951,186
Edmonton	13,790,982	7,336,198	16,306,419	38,714,929	24,687,606	5,829,010	32,366,156
Lethbridge	1,856,051	1,669,779	1,867,558	5,393,388	3,909,694	767,645	4,741,125
Medicine Hat	1,716,192	2,283,827	2,690,841	6,908,554	4,404,128	283,519	4,687,647
British Columbia—							
Vancouver	15,896,560	6,327,382	27,107,203	49,631,338	35,327,647	5,361,950	40,689,597
Victoria	8,150,182	3,751,268	11,750,851	26,371,418	18,305,572	1,482,507	22,788,595
New Westminster	1,205,999	2,471,133	3,283,199	6,960,331	5,838,493	268,196	6,358,560

[1] Includes other assets. [2] Includes other liabilities. [3] None. [4] $2,738,569 depreciation, equivalent to sinking fund reserve and depreciation reserve, has been deducted. [5] $786,546 depreciation has been deducted. [6] $3,806,593 depreciation has been deducted. [7] Total only given.

33.—Summary by Provinces of Statistics of Principal Interest of Urban

Items.	Prince Edward Island.	Nova Scotia.	New Brunswick.
No. of Towns reporting in each Province	1	10	6
General Statistics—			
Area in acres	1,000	23,628	24,645
Estimated Population	3,000	61,700	30,500
Value of Taxable Property $	2,492,970	20,566,738	17,838,550
Incomes Assessed for Municipal Income Tax $	None	428,330	3,601,550
Total Exemption	437,000	7,085,166	7,690,000
Streets, total mileage of	10	198·65	93·16
Length of Streets lighted	10	112·33	63·4
Sidewalks, mileage of	10	111·865	31
Sewers, mileage of	6	44·2	48
Value of Water Supply System $	91,500	1,553,550	1,096,765
Mains, mileage of	10	133·1	63
Value of Fire Equipment $	4,913	123,491	66,000
Receipts from—	$	$	$
Taxation	31,850	667,831	407,023
Licenses	1,946	21,735	8,589
Municipally owned Public Services	3,628	360,580	147,993
Court Fines	680	17,566	3,368
Total Ordinary Receipts	41,849	1,207,075	595,744
Total Extraordinary Receipts	34,000	331,967	189,399
Grand Total all Receipts	75,849	1,539,042	785,143
Expenditures on—			
General Government	2,898	61,745	36,097
Education	5,850	330,382	117,840
Health and Sanitation	3,219	38,526	40,349
Municipally owned Public Services	85	338,190	169,492
Fire Department	2,390	49,828	27,278
Police Department	1,725	34,577	17,097
Charities	None	35,838	19,826
Sinking Funds	5,037	41,172	37,905
Interest	2,310	117,223	69,435
Streets and Sidewalks	10,503	117,418	166,081
Total Ordinary Expenditure	36,547	1,225,008	740,783
Total Extraordinary Expenditure	46,462	197,054	47,482
Grand Total all Expenditures	83,009	1,422,062	788,265
Assets (available)—			
Cash on hand at end of year	9,180	107,312	26,953
Sinking Funds	39,487	519,514	158,578
Taxes in arrears or levied but not due	974	104,744	142,075
Saleable Lands and Buildings	199,446	3,571,356	2,245,009
Other Debts Due	None	26,047	12,815
Total Assets (available)	249,087	4,328,973	2,585,430
Liabilities—			
Bonded Debt	161,000	3,445,860	2,059,238
Floating Debt	3,394	93,437	67,400
All other Liabilities	None	47,157	105,140
Total Liabilities	164,394	3,586,454	2,231,778

[1] Valleyfield, Quebec, gave total only for Assets $602,000 and Liabilities $600,000.
[2] The town of Sandwich included unsold debentures of $165,539 in their total Assets which were not shown in detail and the town of Oshawa gave total only for Liabilities $600,861.

Municipalities of 3,000 to 10,000 Population, for the calendar year 1919.

Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.	Canada, Total.
24	45	3	5	1	8	103
55,627·5	66,714·39	12,233	25,108	1,000	10,739	220,694·89
141,097	229,134	12,437	25,700	3,000	46,100	552,668
55,304,656	155,624,726	8,865,721	24,379,477	2,181,560	33,040,075	280,294,473
903,105	11,306,149	None	190,045	None	None	16,429,179
52,138,722	25,287,619	5,483,785	2,740,817	515,050	6,861,674	108,239,833
329·92	815·018	148·24	307·25	2	158·6	2,062,838
261·35	640·38	32·79	84	None	87	1,291·25
287·13	762·675	60·99	88·35	6	105·9	1,463·91
203·9	317·48	26·71	59·2	5	72·793	783·283
3,958,546	6,570,300	534,646	1,897,087	79,830	1,983,277	17,765,501
160·48	507·81	31	62	7	134·4	1,108·79
243,872	475,223	25,575	153,678	3,295	103,861	1,199,908
$	$	$	$	$	$	$
1,007,522	4,598,983	356,341	1,043,582	98,330	1,168,755	9,380,217
103,539	63,272	3,685	24,796	1,474	34,595	263,631
535,518	1,405,999	85,424	361,624	5,175	608,029	3,513,970
10,258	101,432	3,819	4,754	115	33,103	175,095
1,866,936	7,218,295	479,847	1,548,709	109,111	2,241,996	15,309,562
927,254	2,650,531	138,043	85,110	None	120,149	4,476,454
2,794,190	9,868,826	617,890	1,633,819	109,111	2,362,145	19,786,016
299,893	774,675	30,964	251,087	8,270	104,779	1,570,408
256,790	1,432,682	55,177	303,821	26,785	306,749	2,836,076
124,593	509,282	9,776	53,855	358	50,555	830,513
324,008	1,517,948	66,349	377,713	4,063	507,062	3,304,910
60,780	218,928	7,945	56,910	4,684	62,160	490,903
86,309	145,422	13,023	28,329	2,789	59,952	389,223
26,800	91,600	7,337	39,201	46	31,875	252,523
112,852	192,780	None	70,366	33,768	343,027	836,907
466,258	257,481	76,305	156,438	8,534	254,109	1,408,093
200,544	1,015,862	8,557	42,756	9,762	117,044	1,688,527
2,239,867	6,983,861	337,306	1,487,292	101,149	2,033,213	15,185,026
717,080	3,616,195	293,348	115,293	None	176,222	5,209,136
2,956,947	10,600,056	630,654	1,602,585	101,149	2,209,435	20,394,162
154,114	243,639	69,373	142,831	6,900	87,526	847,828
320,111	1,085,891	90,227	488,902	None	1,497,227	4,199,937
384,739	792,367	565,783	2,185,086	152,762	652,852	4,981,382
8,734,838	15,978,119	1,132,104	6,717,156	310,833	6,546,563	45,435,424
281,497	1,606,231	44,148	253,387	3,515	291,930	2,519,570
10,477,299[1]	19,871,786[2]	1,901,635	9,787,362	474,010	9,076,098	58,751,680
9,364,879	15,556,760	1,480,311	7,445,225	313,562	6,666,532	46,493,367
1,154,039	1,401,363	369,383	451,160	113,253	294,630	3,948,059
432,912	1,088,473	None	824,020	None	1,579,424	4,077,126
11,551,830[1]	18,647,457[2]	1,849,694	8,720,405	426,815	8,540,586	55,719,413

34.—Summary by Provinces of Statistics of Principal Interest of Urban

Items.	Prince Edward Island.	Nova Scotia.	New Brunswick.	Quebec.
No. of Towns reporting in each Province	1	15	2	72
General Statistics—				
Area in acres	850	23,922	3,240	103,213
Estimated Population	1,100	30,198	4,300	128,805
Value of Taxable Property—				
Land $	495,000	7,805,191	1,624,100	54,303,193
Buildings $	[1]	[1]	[1]	24,741,714
Incomes Assessed for Municipal Income Tax $	None	123,800	476,500	443,154
Total Exemptions—				
Land $	166,000	2,014,525	500,000	14,103,845
Buildings $	[1]	110,000	[1]	8,167,941
Streets, mileage of	2·5	108·91	26	564·9
Sidewalks, mileage of	1	76·5	14	325·3
Streets lighted, mileage of	None	77·75	22	359·19
Sewers, mileage of	None	22·5	17	190·2
Value of Water Supply System $	None	589,267	203,000	3,859,718
Mains, mileage of	None	84·5	23	262·98
Value of Fire Equipment $	2,700	42,590	10,500	225,184
Number of Fires	None	37	20	118
Receipts from—	$	$	$	$
Taxation	4,024	318,746	88,895	1,162,458
Licenses	461	3,345	678	20,915
Municipally owned Public Services	None	124,362	15,924	340,951
Court Fines	10	4,268	88	1,068
Sales, Rentals, Leases, etc	None	3,831	None	8,261
Grants and Subventions for Education	None	10,854	None	14,810
Sinking Funds	None	7,671	507	20,320
Refunds	None	283	None	6,473
Miscellaneous	158	53,070	268	100,236
Total Ordinary Receipts	4,653	526,430	106,360	1,675,492
Total Extraordinary Receipts	2,596	198,773	38,941	1,384,743
Grand Total Receipts	7,249	725,203	145,301	3,060,235
Expenditures on—				
General Government	143	53,894	4,241	228,193
Education	1,132	135,585	14,379	148,352
Health and Sanitation	None	10,455	3,007	35,293
Charities	None	19,302	1,650	17,174
Municipally owned Public Services	None	110,424	18,189	437,032
Police Department	494	18,988	2,051	23,554
Fire Department	1,718	17,943	8,950	21,169
Streets and Sidewalks	1,813	96,248	18,452	259,215
Sinking Funds	30	19,254	4,007	84,174
Interest	91	37,212	9,856	582,071
Miscellaneous	62	62,010	13,274	313,151
Total Ordinary Expenditure	5,483	581,315	98,056	2,149,378
Total Extraordinary Expenditure	1,500	111,954	25,695	905,201
Grand Total Expenditures	6,983	693,269	123,751	3,054,579
Assets (available)—				
Cash on hand at end of year	None	26,121	25,228	161,063
Sinking Funds	226	254,268	38,443	242,483
Taxes in arrears or levied but not due	410	43,799	8,600	1,920,812
Saleable Lands and Buildings, etc	500	1,435,448	254,454	8,204,288
Accounts receivable	None	19,326	4,000	478,403
Total Assets (available)	1,136	1,778,962	330,725	11,007,049
Liabilities—				
Bonded Debt	2,300	1,337,684	235,900	9,609,984
Floating Debt	None	62,455	38,000	2,132,027
All other Liabilities	None	108,820	108	368,182
Total Liabilities	2,300	1,508,959	274,008	12,110,193

[1]Included in land. [2]No record. [3]Detailed statements were not given in a few instances by town officials, so that totals for provinces are slightly different from details. In Ontario, the totals include, $79,591 Assets and $79,132 Liabilities for Amherstburg; in Manitoba $35,306 Receipts, $32,661 Expenditure, $25,681 Assets and $30,286 Liabilities for Killarney; in Alberta $41,518 Liabilities for Hanna.

Municipalities of 1,000 to 3,000 Population, for the calendar year 1920.

Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.	Yukon.	Canada, Total.
88	9	20	21	12	1	241
69,033	15,962	32,043	22,022	20,063	495	290,843
155,791	12,201	27,500	35,702	21,600	2,000	419,197
29,036,594	6,052,693	10,897,566	16,878,713	13,014,220	782,085	140,889,355
43,091,359	1,686,395	6,698,460	4,595,198	5,370,660	[1]	86,183,786
1,959,700	None	232,250	49,910	None	188,707	3,474,021
2,747,560	1,285,928	1,496,569	2,802,475	2,199,209	67,500	27,383,611
7,748,277	597,175	1,329,595	420,834	3,207,968	330,000	21,911,790
771·24	78·75	293·5	190·58	121·45	12	2,169·83
622·38	47·5	99·05	84·45	64·5	[2]	1,334·68
555·18	32	74·49	85·5	71·8	[2]	1,277·91
109·7	10·5	25·44	24·25	6	1·45	407·04
3,542,692	347,903	1,358,764	1,308,204	530,893	30,535	11,770,976
314·68	11·1	66·25	71·93	80·5	5·5	920·44
374,368	25,098	103,868	70,666	48,953	32,000	935,927
265	12	58	47	62	17	636
$	$	$	$	$	$	$
3,159,232	325,829	841,814	903,395	543,445	28,038	7,375,876
33,167	6,765	21,252	19,136	29,095	2,390	137,204
937,063	103,461	217,847	296,138	195,260	None	2,231,006
59,547	1,263	2,441	2,573	19,735	5	90,199
35,625	4,176	9,939	15,418	16,942	None	94,192
49,128	4,441	4,591	9,392	89,945	None	183,161
58,126	2,210	354	1,295	97,276	None	187,759
7,652	1,727	4,654	894	864	None	22,547
140,574	12,844	9,131	7,075	29,696	9,000	362,052
4,480,114	462,716	1,112,023	1,255,316	1,022,258	39,433	10,684,795
2,973,899	137,555	175,219	177,272	359,830	None	5,448,828
7,454,013	635,577 [3]	1,287,242	1,432,588	1,382,088	39,433	16,168,929
306,230	71,179	96,073	122,598	73,549	2,593	958,693
1,157,686	100,282	322,841	404,787	250,130	1,200	2,536,374
186,804	11,013	34,487	31,612	17,301	73	330,045
27,178	4,732	10,070	13,493	9,659	None	103,258
1,304,034	127,841	274,235	329,210	210,420	None	2,811,385
53,375	6,847	21,188	21,600	36,496	None	184,593
128,785	5,388	34,821	32,686	30,160	26,789	308,409
718,756	28,616	64,324	97,128	95,951	12,019	1,392,522
52,085	2,685	13,395	21,390	172,072	None	369,092
289,034	48,671	98,642	108,777	146,191	None	1,320,545
470,048	35,867	53,186	25,301	30,193	438	1,003,530
4,694,015	443,121	1,023,262	1,208,582	1,072,122	43,112	11,318,446
2,913,302	156,347	225,817	231,942	276,124	1,000	4,848,882
7,607,317	632,129 [3]	1,249,079	1,440,524	1,348,246	44,112	16,199,989
276,311	44,556	219,089	63,663	55,239	2,127	873,397
518,037	80,982	59,827	184,055	445,083	None	1,823,404
464,461	105,879	751,500	1,040,663	347,673	5,258	4,689,055
10,642,398	868,503	2,269,537	3,654,974	1,682,400	None	29,012,502
473,092	40,187	53,351	67,549	77,617	1,000	1,214,525
12,453,890 [3]	1,165,788 [3]	3,353,304	5,010,904	2,608,012	8,385	37,718,155
8,187,506	855,927	2,835,936	2,598,626	2,340,188	None	28,004,051
415,031	68,637	262,576	405,842	161,285	None	3,545,853
491,960	100,118	364,257	183,108	90,011	None	1,706,564
9,173,629 [3]	1,054,968 [3]	3,462,769	3,229,094 [3]	2,591,484	None	33,407,404

4.—National Wealth and Income.

National Wealth.—There are several methods of computing national wealth, *i.e.*, the aggregate value of property within the nation—apart from undeveloped natural resources. Perhaps the most familiar of these methods is that of working back to capital values through income tax returns this can be applied only in countries where incomes are thoroughly appraised. A second method is that of estimation from probate returns, the value of the estates of deceased persons being regarded as representative. A third is that of a complete census, based upon a canvass of the individual. In the accompanying table a fourth method, namely, the so-called "inventory" method, is employed; it consists in totalling the amounts known from various sources to be invested in agriculture, manufactures, dwellings, etc., etc.

It must be understood that statistics of this character are suggestive and indicative rather than strictly accurate. The concept of wealth is distinctly intangible, and there are numerous elements of uncertainty in a calculation of this nature. It should also be pointed out that Table 35 covers the year 1920 (the latest year for which the statistics are available), and that in 1920 the money values of commodities reached their peak. Estimates for subsequent years will doubtless show considerable decreases in several of the items.

35.—Estimated National Wealth of Canada, 1920.

1. Farm Values (land, buildings, implements and machinery, and live stock, Census 1921)	$6,592,351,789
2. Mines (capital employed, 1921)	559,514,154
3. Forests (estimated value of accessible raw materials, pulpwood, and capital invested in woods operations)	1,244,343,100
4. Fisheries (capital invested in boats, gear, etc., in primary operations; capital in secondary operations included under "Manufacturing Machinery")	29,893,213
5. Central Electric Stations (capital invested, 1920)	518,997,000
6. Steam and Electric Railways (investment in road and equipment)	2,868,000,000
7. Canals (amount expended on construction to March 31, 1921)	136,942,734
8. Shipping (estimated from 1918 Census)	100,000,000
9. Telegraph and Telephone Systems (cost of plant)	175,000,000
10. Urban Real Property (assessed valuations and exempted property, and estimate for undervaluation by assessors, and for roads, sewers, etc.)	5,944,000,000
11. Manufacturing Machinery (Census of Industry, 1920)	583,328,516
12. Stocks of Raw Materials and Manufactured Goods (Census of Industry, 1920, for amount in manufacturers' hands; estimate for amount in dealers' hands)	1,316,000,000
13. Stored Products of Farm, Fisheries, etc. (estimated from grain trade statistics, cold storage, etc.)	400,000,000

14. Household Furnishings, Clothing, Carriages, Motors, etc. (estimated according to procedure in U.S.A. and Australian Census Bureaus)	$1,144,000,000
15. Specie (held by Government, Chartered Banks, and estimated for public holdings)	202,010,106
16. Imported Merchandise in store (estimate based on imports during year)	668,460,510
Total Estimated National Wealth, 1920	**$22,482,841,122**

National Income.—The national income of Canada is necessarily less than its national production, a total for which is suggested in the general survey of production on pages 216-220 of this volume. If, as pointed out there, there is no reason to suppose that those whose activities are not connected with the production of "form-utilities" are less "productive" in the broad sense of the term than others, the total value of the production of 1920, the year of peak prices, must have been not less than $5,000,000,000.

In order to arrive at the figure of national income, however, certain heavy deductions from the above amount must be made—deductions especially connected with the maintenance of the industrial equipment of the country—providing not only for depreciation but for obsolescence and replacement by new and improved apparatus of production. Altogether, the charges under this head may have been not less than $500,000,000. This would leave the 1920 income of the Canadian people at somewhat over $4,500,000,000, which, it must be remembered, is the national income at "peak" prices.

In countries having an income tax, a certain approximation to the national income may be obtained by taking the aggregate of the incomes assessed for the purposes of the income tax, making allowances for evasion and estimating the income of those whose incomes fall below its lower limits. Thus, in the United Kingdom, it was estimated that before the war half of the national income went to the great masses of people whose incomes were below the lower limit of the income tax—then £160 per annum.

Similarly, in the United States, where the lower limit of the income tax is the same as in Canada, the statistics of incomes assessed for income tax have been used in the study of the aggregate income of the nation, together with material based on statistics of production.

In Canada, the income tax is a newer thing than in either the United States or the United Kingdom; also, in a newer country than either, incomes are to a greater extent received in kind. Both of these considerations render it improbable that so large a percentage of the national income of Canada is brought under the review of the Income Tax authorities as is the case in the other countries mentioned. In the fiscal year ended March 31, 1921, 3,696 corporations and 190,561 individuals paid income tax on incomes aggregating $912,410,429.[1] Statistics of income for calendar years 1921 and 1922 assessed in the fiscal years 1922 and 1923 are given by provinces in Table 36. The distribution of these incomes by classes of income is given in Table 37, which shows that in the fiscal year ended 1923, 281,182 individuals and 6,010 corporations paid income tax. The former figure may perhaps be compared with the 1,901,227 families enumerated at the census of 1921.

[1] See Hansard of June 22, 1922, pp. 3362-3.

36.—Amount of Income Assessed for the purposes of the Income War Tax, by Provinces, for the fiscal years ended March 31, 1922-1923.

Provinces.	Amount of Income Assessed.	
	1922.	1923.
	$	$
Prince Edward Island	3,707,988	2,774,649
Nova Scotia	51,057,049	36,613,618
New Brunswick	35,238,694	29,309,120
Quebec	362,078,282	286,349,563
Ontario	598,456,379	481,223,381
Manitoba	134,039,184	88,634,308
Saskatchewan	89,942,132	57,513,057
Alberta	66,912,332	51,539,223
British Columbia	119,716,747	91,938,579
Yukon	1,380,383	1,626,667
Total	**1,462,529,170**	**1,127,522,165**
Adjustments	–	35,114,240
Total	**1,462,529,170**	**1,092,407,925**

37.—Number of Individual and Corporate Taxpayers, by Size of Incomes and Amount of Taxes paid, under the Income War Tax Act, fiscal years ended March 31, 1922 and 1923.

Income—Class.	Individuals.				Corporations.			
	1922.		1923.		1922.		1923.	
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
		$		$		$		$
$1,000 to $6,000	154,675	4,022,056	146,178	3,414,475	–	–	–	–
$2,000 to $6,000	116,212	5,557,503	113,359	4,616,287	3,023	665,723	2,407	546,081
$6,000 to $10,000	11,840	3,981,303	13,030	3,603,536	1,508	926,596	1,052	699,621
$10,000 to $20,000	5,404	5,460,899	6,069	5,212,937	1,359	1,848,227	959	1,478,950
$20,000 to $30,000	1,290	3,629,108	1,365	2,997,914	690	1,581,102	437	1,148,752
$30,000 to $50,000	667	4,295,530	801	3,810,107	597	2,351,149	413	1,682,344
$50,000 and over	496	12,699,832	380	8,212,112	1,109	31,724,339	742	22,987,549
Total	**290,584**	**39,646,231**	**281,182**	**31,867,368**	**8,286**	**39,097,136**	**6,010**	**28,543,297**
Unclassified amount	–	824,778	–	490,046	–	110,668	–	269,113
Total	–	**40,471,009**	–	**32,357,414**	–	**39,207,804**	–	**28,812,410**
Refund	–	650,412	–	667,997	–	344,046	–	790,264
Total	–	**39,820,597**	–	**31,689,417**	–	**38,863,758**	–	**28,022,146**

II.—CURRENCY AND BANKING, LOAN AND TRUST COMPANIES.

1.—Canada's Monetary System.

Early trade in Canada was carried on by means of barter, which at times resulted (in transactions between Indians and fur traders) in the adoption of beads, blankets, etc., as recognized media of exchange. The practice, however, was purely a local one. Later, during the French period in Canada, while barter still formed perhaps the most important means of exchange between individuals and merchants, a more or less satisfactory currency system developed. Beaver and other furs, tobacco and wheat were at times used as substitutes for currency, the last named being at one time a legal tender. A rather inadequate system was that which developed during the period of French military occupation, when playing

cards, stamped with a value and signed by the Intendant, redeemable yearly on the receipt of bills of exchange on Paris, came into circulation. Other paper money, most of it of little value, was also issued, and the total amount outstanding at the time of the cession was estimated at 80,000,000 livres, the great bulk of which finally proved worthless.

The British government sought to establish a uniform standard of colonial currency, but since, at this time, French coinage again began to come into circulation and the Spanish dollar also rivalled the English shilling as the most common medium of exchange, this was not universally possible. English sovereigns were overrated in terms of dollars in an endeavour to encourage their circulation. A rate of 5s. to the dollar was set in Halifax and was in use for government accounting systems, while in Montreal York currency (the rates prevalent in New York), giving the shilling an exchange value of 7s. 6d. or 8s., was in common use.

Canadians had become more or less familiar with the characteristics of paper money from the experiences of the various northern States during the first half of the eighteenth century. During the war of 1812 this familiarity was increased by the establishment of an army bill office, issuing bills of various denominations redeemable on presentation. Increased commercial relations between the two countries and a growing volume of trade resulted in a tendency in Canada toward a decimal coinage, and in 1853 a measure was passed providing for the adoption of a decimal currency with a dollar equivalent to the American dollar; the British sovereign was made legal tender at $4.86\frac{2}{3}$. An Act of 1857 requiring all government accounts to be kept in dollars and cents came into force on Jan. 1, 1858; the formal adoption of decimal currency in the province of Canada dates from that time.

By the Uniform Currency Act of 1871 (34 Vict., c. 4), the decimal currency was extended throughout the Dominion, the British sovereign was made legal tender for $4.86\frac{2}{3}$, and the United States eagle made legal tender for $10, while authority was taken to coin a Canadian $5 gold piece. No Canadian gold coinage was, however, issued prior to the establishment of the Canadian branch of the Royal Mint in 1908, the first coins then struck being sovereigns similar to those of Great Britain, but with a small "C" identifying them as having been coined in Canada. In May, 1912, the first Canadian $10 and $5 gold pieces were struck, but the Canadian gold coinage has so far been limited in amount, since Canadians have generally preferred Dominion notes to gold for use within the country, and when gold is needed for export, British or American gold coin or bullion serve the purpose equally well.

Gold.—Gold is used only to an insignificant extent as a circulating medium in Canada, its monetary use being practically confined to reserves, but 5 dollar and 10 dollar gold pieces weighing respectively 129 and 258 grains, 9-10 pure gold by weight, have been coined, the Canadian gold dollar thus containing 23.22 grains of pure gold. These coins were first issued in 1912, authority to issue them having been first conferred in 1910. By the Currency Act, 1910 (9-10 Edw. VII, c. 14), British sovereigns which are legal tender for $4.86\frac{2}{3}$, and other gold coins, and the 5 dollar, 10 dollar and 20 dollar gold coins of the United States, which contain the same weight of gold as Canadian gold coins of these denominations, are also legal tender. These, however, are almost entirely divided between the Dominion Government and the banks as reserves, and the chief circulating medium of the country is provided by paper and token currency. The gold coinages of the Ottawa branch of the Royal Mint, which was opened on January 2, 1908, are given in Tables 38 and 39. Table 40, compiled by the Dominion Comptroller of Currency,

gives the form in which the gold has been held by the Government in recent years. The American gold, it will be seen, greatly preponderates, and there is a considerable additional amount held by the banks, as it is legal tender in both countries.

38.—Coinage of the Ottawa Branch of the Royal Mint in the calendar years 1920-22.

Description of Coins.	1920.		1921.		1922.	
	Struck.	Issued.	Struck.	Issued.	Struck.	Issued.
Gold Sovereigns	–	4	–	136	–	–
	or	or	or	or	or	or
	–	$19 47	–	$661,87	–	–
Gold—	$	$	$	$	$	$
Canadian $5's	–	–	–	–	–	–
$10's	–	–	–	–	–	–
Silver	1,926,690 85	1,356,000 00	603,081.80	128,000 00	–	24,000.00
Bronze	223.737 79	209.085 00	75,559.64	60,700 00	12,439.03	12,400.00
Nickel (5c.)	–	–	–	–	238,159.30	69,000.00

In addition to the above coinages, the following were executed for the Governments of Newfoundland and Jamaica:—

	1917.	1918.	1919.	1920.
Newfoundland—Silver	$240,000	$245,000	$200,000	–
Bronze	$7,000	–	$3,000	$3,000
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Jamaica—Cupro-nickel	– 1,515 9 7½	2,061 14 1	–	

39.—Gold Coinages of the Ottawa Branch of the Royal Mint, 1908-1922.

Years.	Gold.			Years.	Gold.		
	Sovereigns.		Canadian Currency.[1]		Sovereigns.		Canadian Currency[1]
	£	$	$		£	$	$
1908	636	3,095 20	–	1915	–	–	–
1909	16,273	79,195 27	–	1916	6,111	29,740 20	–
1910	28,012	136,325 07	–	1917	58,845	286,379 00	–
1911	256,946	1,250,470 53	–	1918	106,516	518,377 87	–
1912	–	–	1,477,710	1919	135,889	661,326 47	–
1913	3,715	18,079 67	1,890,620	1920	–	–	–
1914	14,891	72,469 53	1,499,575	1921	–	–	–
				1922	–	–	–

[1]Authority to issue Canadian gold coins was first conferred in 1910.

40.—Composition of Canadian Gold Reserves, December 31, 1905-1922.

Years.	British Coin.	American Coin.	Canadian Coin.	Bullion.
	$	$	$	$
1905	3,990,717 00	29,494,298	–	–
1906	7,375,857 00	31,040,149	–	–
1907	5,366,478 00	33,529,889	–	–
1908	6,261,715 00	54,909,076	–	–
1909	6,537,227 00	62,988,474	–	–
1910	6,304,524 30	68,261,279	–	222,933 99
1911	6,900,094 86	93,507,764	–	222,933 99
1912	4,554,691 31	98,648,736	650,185	222,933 99
1913	6,391,374 52	106,642,969	2,118,210	222,933 99
1914	4,482,524 44	86,382,620	3,440,150	320,344 71
1915	29,606,990 36	86,516,595	3,436,095	775,201 36
1916	29,333,111 40	86,034,920	3,426,760	803,002 29
1917	27,476,789 52	77,899,494	3,413,465	11,352,856 02
1918	27,362,254 93	75,785,665	3,411,465	14,701,439 33
1919	27,661,192 36	60,988,110	3,408,310	27,154,222 32
1920	26,728,016 34	35,896,485	3,387,125	35,090,343 77
1921	26,729,500 65	35,896,305	3,385,690	18,558,557 18
1922	26,730,576 20	67,941,550	3,340,650	34,572,503 78

Token Currency.—Canadian silver dollars weighing 360 grains, 37-40 fine, are provided for by the Currency Act of 1910, but no dollar coins have ever been struck by the Mint. Fifty, twenty-five, ten and five-cent pieces of weight proportionate to their respective fractions of the dollar, and of the same fineness, are

in circulation, but by chapter 9 of the Statutes of 1920 the standard of fineness was reduced to 8-10. In 1921 the coinage of a nickel five-cent piece weighing 70 grains was authorized, and a number of these coins have appeared. Silver coins are legal tender only up to ten dollars, nickel coins to five dollars, and bronze coins to twenty-five cents.

41.—Circulation in Canada of Silver and Bronze Coin, December 31, 1901-1922.

Years.	Net Amount of Silver Coin Issued.		Amount per Head.		Net Amount of Bronze Coin Issued.		Amount per Head.	
	A. During the Year.	B. Since 1858.	Col. A.	Col. B.	C. During the Year.	D. Since 1858.	Col. C.	Col. D.
	$	$	cts.	$	$	$	cts.	cts.
1901	420,000	8,279,924	7·8	1·53	41,000	676,429	0·8	11·0
1902	774,000	9,053,924	14·0	1·64	30,000	706,429	0·5	12·8
1903	633,850	9,687,774	11·1	1·70	40,000	746,429	0·7	13·1
1904	350,000	10,037,774	5·9	1·71	25,000	771,429	0·4	13·1
1905	450,000	10,487,774	7·4	1·72	20,000	791,429	0·3	13·0
1906	807,461	11,295,235	12·8	1·79	41,000	832,429	0·6	13·2
1907	1,194,000	12,489,235	17·9	1·88	32,000	864,429	0·5	13·0
1908	38,541	12,527,776	0·6	1·80	21,604	886,033	0·3	12·8
1909	648,700	13,176,476	9·0	1·83	39,300	925,333	0·5	12·9
1910	1,151,186	14,327,662	15·4	1·91	42,020	967,353	0·6	12·9
1911	1,343,001	15,670,663	18·6	2·18	54,275	1,021,628	0·8	14·2
1912	1,303,237	16,973,900	17·7	2·30	49,977	1,071,605	0·7	14·5
1913	927,131	17,901,031	12·3	2·38	55,572	1,127,177	0·7	15·0
1914	626,198	18,527,229	8·1	2·41	35,057	1,162,234	0·4	15·1
1915	61,344	18,588,573	0·8	2·36	50,354	1,212,588	0·6	15·4
1916	1,179,516	19,768,089	14·7	2·46	110,646	1,323,234	1·4	16·5
1917	1,790,941	21,559,030	21·9	2·64	116,800	1,440,034	1·4	17·6
1918	2,329,091	23,888,121	28·0	2·87	131,777	1,571,811	1·6	18·9
1919	3,196,027	27,084,148	37·7	3·19	115,011	1,686,822	1·4	19·9
1920	1,300,702	28,384,850	15·1	3·29	208,961	1,895,783	2·4	22·0
1921	40,191	28,344,659	0·5	3·23	60,543	1,956,326	0·7	22·3
1922	–	26,620,740[1]	0	2·97	3,858	1,960,184	0·0	21·9

[1] The decrease shown for 1921 and for 1922 is due to the withdrawal of worn and mutilated silver coins from circulation.

NOTE.—Nickel coinage in circulation on Dec. 31, 1922, amounted to $51,960.

Dominion Notes.—An important part of the Canadian monetary system is the paper currency of the Dominion Government. Under the Dominion Notes Act, 1914 (5 Geo. V, c. 4), the Dominion Government is authorized to issue notes up to and including $50,000,000 against a reserve in gold equal to one-quarter of that amount. By Chapter 4, Acts of 1915, "An Act respecting the Issue of Dominion Notes", the Dominion Government is authorized to issue notes up to $26,000,000 without any reserve of gold, $16,000,000 of the notes to be against certain specified Canadian railway securities guaranteed by the Dominion Government.[1] Notes may be issued to any additional amount in excess of $76,000,000, but (except as provided by the Finance Act, 1914), an amount of gold equal to the excess must be

[1] The following is an outline of Canadian legislation respecting the issue of notes. After Confederation, by an Act of 1868 (31 Vict., c. 46), authority was given for the issue of notes to the extent of eight million dollars. The reserve was fixed at 20 p.c. up to a circulation of five millions; beyond that, 25 p.c. to be held as reserve. The law of 1870 (33 Vict., c. 10), authorized a limit of nine million dollars. The reserve was fixed at 20 p.c., but the nine millions were only to be issued when the specie amounted to two millions. Dollar for dollar was to be held beyond nine millions. In 1872, (35 Vict., c. 7), the reserve for the excess over nine millions was fixed at 35 p.c. in specie. This was amended in 1875 (38 Vict., c. 5) by requiring dollar for dollar beyond twelve millions; for the reserve between nine and twelve millions, 50 p.c. in specie was to be held. In 1878 the law respecting Dominion notes was extended to the provinces of Prince Edward Island, British Columbia, and Manitoba. In 1880 (43 Vict., c. 13) the basis of the present standard was established. A reserve of 25 p.c. in gold and guaranteed debentures was required, of which 15 p.c. at least was to be in gold. The limit was raised to twenty million dollars. In 1894 (57–58 Vict., c. 21) the limit was raised to twenty-five millions but this was found unworkable and was repealed in 1895 (58–59 Vict., c. 16), and authority was given to issue notes to any amount over twenty millions, on holding dollar for dollar beyond that sum. In 1903 (3 Edw. VII, c. 43), the Minister of Finance was required to hold gold and guaranteed debentures of not less than 25 p.c. on Dominion notes issued and outstanding up to thirty million dollars; beyond thirty millions he was required to hold gold equal to the excess. In 1914 (5 Geo. V, c. 4), this amount was raised to fifty millions and in 1915, to seventy-six millions, under the conditions stated in the text. The Finance Act, 1914 (5 Geo. V, c. 3), makes provision, in case of war, panic, etc., for the issue of Dominion notes against approved securities.

held. Thus Dominion notes are under normal conditions gold certificates. Under the Act, the Government issues notes of the denominations of 25 cents, $1, $2, $4, $5, $50, $100, $500, $1,000. In addition, "special" notes of the denominations of $500, $1,000, $5,000 and $50,000 (first issue September, 1918), are issued for use between banks only, the purpose being to safeguard against theft. Table 42 gives the main statistics of Dominion note circulation and the reserve on which it has been built since 1890, while Table 43 shows the use of notes of different denominations during the past six years.

42.—Dominion Notes Circulation and Reserves at June 30, 1890-1922.

Years ended June 30.	Notes in Circulation.					Reserves of Specie and Guaranteed Debentures.[4]	Circulation uncovered by Specie.	Percentage Reserve to Circulation.
	Notes 1, 2, 4 and 5, and fractionals.[1]	Large notes 50, 100, 500, 1000, 5000.[2]	Total.					
			Amount.	Per capita.	Index No.[3]			
	$	$	$	$		$	$	p.c.
1890	6,665,942	8,691,950	15,357,892	3·20	65·3	5,232,181	10,125,711	34
1891	6,768,666	9,407,650	16,176,316	3·34	68·2	5,723,693	10,452,623	35
1892	6,898,348	10,384,350	17,282,698	3·53	72·0	6,868,243	10,414,455	40
1893	7,136,743	11,311,750	18,448,493	3·73	76·1	8,396,014	10,052,479	45
1894	6,967,818	13,093,900	20,061,718	4·09	83·5	10,239,071	9,822,647	51
1895	7,059,331	12,460,900	19,520,231	3·87	79·0	9,707,750	9,812,481	49
1896	7,377,096	12,995,100	20,372,196	4·00	81·6	10,704,901	9,667,295	52
1897	7,519,345	14,798,750	22,318,095	4·34	88·6	12,667,315	9,650,780	56
1898	8,157,243	14,020,950	22,178,193	4·26	86·9	12,760,405	9,417,788	57
1899	8,770,165	15,466,300	24,236,465	4·60	93·9	15,008,441	9,228,024	61
1900	9,640,473	16,454,450	26,094,923	4·90	100·0	14,422,710	11,672,213	55
1901	10,161,809	17,736,700	27,898,509	5·19	105·9	16,503,740	11,394,769	59
1902	11,029,985	21,750,400	32,780,385	5·92	120·8	20,848,305	11,932,080	63
1903	12,173,248	26,832,950	39,006,198	6·87	140·2	27,877,260	11,128,938	67
1904	12,581,833	28,992,950	41,574,783	7·13	145·5	25,369,291	16,205,492	61
1905	13,045,820	34,288,400	47,334,220	7·89	161·0	31,272,122	16,062,098	66
1906	14,633,576	35,307,850	49,941,426	8·09	165·1	30,960,597	18,980,829	62
1907	15,939,131	42,377,400	58,316,531	9·25	188·7	36,935,936	21,380,595	63
1908	15,279,675	47,778,450	63,058,125	9·71	198·2	41,107,850	21,950,275	65
1909	15,860,149	63,145,150	79,005,299	11·80	240·8	57,309,932	21,695,367	72
1910	17,871,477	71,414,250	89,285,727	12·90	263·3	68,355,787	20,929,940	75
1911	19,840,695	79,468,250	99,308,945	13·78	281·2	78,005,231	21,303,714	78
1912	22,982,588	88,949,650	111,932,238	15·19	310·0	92,442,098	19,490,140	82
1913	28,845,737	87,517,800	116,363,537	15·45	315·3	94,943,499	21,420,038	81
1914	24,586,448	89,595,650	114,182,098	14·84	302·8	92,663,575	21,518,523	81
1915	25,183,685	126,937,050	152,120,735	19·34	394·7	89,573,041	62,547,693	59
1916	27,283,425	148,213,750	175,497,175	21·84	445·7	114,071,032	61,426,143	66
1917	29,498,409	149,069,600	178,568,009	21·82	445·3	119,110,113	59,457,896	67
1918	32,623,514	248,716,000	281,339,514	33·78	689·4	114,951,618	166,387,896	41
1919	35,084,194	265,665,650	300,749,844	35·47	723·9	118,268,407	182,481,437	39
1920	37,203,890	254,812,400	292,016,290	33·83	690·4	95,538,190	196,478,100	33
1921	34,403,934	234,365,250	268,769,184	30·58	624·1	83,854,487	184,914,697	31
1922	31,404,161	201,344,250	232,748,411	25·96	529·8	85,495,068	147,253,343	37

[1] Includes Provincial notes amounting to $32,857 in 1890 and reduced gradually to $27,710 in 1922.
[2] Includes issue of $50,000 notes in 1919, 1920, 1921 and 1922.
[3] Circulation in 1900 is taken as 100.
[4] Guaranteed debentures amounted to $1,946,666 from 1890 to 1910: and $16,000,000 from 1915 to 1923.

43.—Denominations of Dominion Notes in Circulation, March 31, 1918-1923.

Denominations.	1918.	1919.	1920.	1921.	1922.	1923.
$	$	$	$	$	$	$
1	14,414,114	15,217,261	16,550,738	16,456,102	15,387,109	15,921,295
2	11,356,895	12,161,480	13,238,915	12,819,010	11,335,549	11,854,372
4	42,187	39,439	38,299	37,567	36,735	35,791
5	4,813,508	4,772,455	3,434,275	3,699,880	1,886,410	2,154,470
50	5,350	4,200	3,950	3,800	3,750	3,750
100	400	–	–	–	–	–
500	2,355,500	1,868,500	2,596,000	2,683,500	2,728,500	3,034,000
1,000	3,841,000	4,146,000	4,773,000	5,050,000	4,999,000	6,019,000
500 special	174,000	124,500	95,000	70,000	13,500	2,000
1,000 "	1,375,000	992,000	1,159,000	962,000	931,000	935,000
5,000 "	211,230,000	213,505,000	234,105,000	191,980,000	142,505,000	124,845,000
50,000[1] "	–	44,000,000	34,650,000	42,800,000	60,350,000	76,550,000
Fractional	1,163,141	1,200,120	1,260,872	1,293,283	1,257,163	1,275,372
Provincial	27,766	27,743	27,743	27,743	27,710	27,710
Total	**250,798,861**	**298,058,698**	**311,932,792**	**277,882,885**	**241,461,426**	**242,657,765**

[1] First issue of $50,000 notes appears in bank statement of September, 1918, amounting to $5,000,000.

Bank Notes.—Bank notes form the chief circulating medium in use in Canada. Under the Canadian Bank Act, the banks are authorized to issue notes of the denominations of $5 and multiples thereof to the amount of their paid-up capital. These notes are not in normal times legal tender.

In addition, during the period of the movement of the crops (September 1 to February 28-29), the banks may issue "excess" circulation to the amount of 15 p.c. of their combined capital and "rest or reserve" funds. In the event of war or panic, the Government may permit the "excess" to run all the year. The banks pay interest on the excess at 5 p.c. If a bank desires to extend its circulation, it may do so by depositing dollar for dollar in gold or Dominion notes in the central gold reserves. The figures of bank note circulation are given in Table 44. Table 45 brings together the results obtained above as to the quantity of the circulating medium in the hands of the Canadian public.

In case of insolvency, the notes of a bank are a first lien upon its assets. They are further secured, in case of insolvency, by the Bank Circulation Redemption Fund, to which all banks contribute on the basis of 5 p.c. of their average circulation, the sum thus secured being available for the redemption of the notes of failed banks.

44.—Statistics of Bank Note Circulation, 1892-1922.[1]

Years.	Paid up Capital.	"Rest" Fund.	"Redemption" Fund.[2] (Deposits with Minister of Finance.)	Notes in Circulation.		
				Amount.	Per Capita.	Index No.[3]
	$	$	$	$	$	
1892	61,626,311	24,511,709	1,314,240	33,788,679	6·91	79·0
1893	62,009,346	25,837,753	1,790,619	33,811,925	6·85	78·3
1894	62,063,371	27,041,235	1,817,511	31,166,003	6·37	72·8
1895	61,800,700	27,273,500	1,814,089	30,807,041	6·12	69·9
1896	62,043,173	26,526,632	1,831,191	31,456,297	6·18	70·6
1897	62,027,703	27,087,782	1,864,937	34,350,118	6·68	76·3
1898	62,571,920	27,627,520	1,938,660	37,873,934	7·28	83·2
1899	63,726,399	28,958,989	2,033,865	41,513,139	7·89	90·2
1900	65,154,594	32,372,394	2,221,128	46,574,780	8·75	100·0
1901	67,035,615	36,249,145	2,487,541	50,601,205	9·36	107·0
1902	69,869,670	40,212,943	2,832,401	55,412,598	10·02	114·5
1903	76,453,125	47,761,536	2,971,260	60,244,072	10·62	121·4
1904	79,234,191	52,082,335	3,237,891	61,769,888	10·60	121·1
1905	82,655,828	56,474,124	3,448,463	64,025,643	10·68	122·1
1906	91,035,604	64,002,266	3,923,531	70,638,870	11·44	130·7
1907	95,953,732	69,806,892	4,304,524	75,784,482	12·02	137·4
1908	96,147,526	72,041,265	4,249,367	71,401,697	11·00	125·7
1909	97,329,333	75,887,695	4,317,006	73,943,119	11·04	126·2
1910	98,787,929	79,970,346	4,844,475	82,120,303	11·87	135·7
1911	103,009,256	88,892,256	5,353,838	89,982,223	12·57	143·7
1912	112,730,943	102,090,476	6,211,881	100,146,541	13·60	155·4
1913	116,297,729	109,129,393	6,536,341	105,265,336	13·98	160·0
1914	114,759,807	113,130,626	6,693,684	104,600,185	13·60	155·4
1915	113,982,741	113,020,310	6,756,648	105,137,092	13·37	152·8
1916	113,175,353	112,989,541	6,811,213	126,691,913	15·77	180·2
1917	111,637,755	113,560,997	6,324,442	161,029,606	19·69	225·0
1918	110,618,504	114,041,500	5,817,646	198,645,254	23·85	272·6
1919	115,004,960	121,160,774	6,054,419	218,919,261	25·82	295·1
1920	123,617,120	128,756,690	6,122,715	228,800,379	26·51	303·0
1921	129,096,339	134,104,030	6,417,287	194,621,710	22·15	253·1
1922	125,456,485	129,627,270	6,493,593	166,466,109	18·56	212·1

[1] The statistics in this table are averages computed from monthly returns in each year.
[2] Cash, i.e., gold or Dominion notes.
[3] Circulation in 1900 is taken as 100.

45.—Circulating Medium in Hands of the Public, 1900-1922.

Years.	Silver.		Bronze.		Bank Notes.	
	Amount.	Per Capita.	Amount.	Per Capita.	Amount.[3]	Per Capita.
	$	$	$	$	$	$
1900	7,911,998	1·49	635,429	·11	46,574,780	8.75
1901	8,279,924	1.53	676,429	.12	50,601,205	9.36
1902	9,053,924	1.64	706,429	.13	55,412,598	10.02
1903	9,687,774	1.70	746,429	.13	60,244,072	10.62
1904	10,037,774	1.71	771,429	.13	61,769,888	10.60
1905	10,487,774	1.72	791,429	.13	64,025,643	10.68
1906	11,295,235	1.79	832,429	.13	70,638,870	11.45
1907	12,489,235	1.88	864,429	.13	75,784,482	12.03
1908	12,527,776	1.80	886,033	.13	71,401,697	11.00
1909	13,176,476	1.83	925,333	.13	73,943,119	11.04
1910	14,327,662	1.91	967,353	.13	82,120,303	11.87
1911	15,670,663	2.18	1,021,628	.14	89,982,223	12.49
1912	16,973,900	2.30	1,071,605	.15	100,146,541	13.60
1913	17,901,031	2.38	1,127,177	.15	105,265,336	13.98
1914	18,527,229	2.41	1,162,234	.15	104,600,185	13.60
1915	18,588,573	2.36	1,212,588	.15	105,137,092	13.37
1916	19,768,089	2.46	1,323,234	.17	126,691,913	15.77
1917	21,559,030	2·64	1,440,034	.18	161,029,606	19.69
1918	23,888,121	2.87	1,571,811	.19	198,645,254	23.12
1919	27,084,148	3.19	1,686,822	.20	218,919,261	23.82
1920	28,384,850	3.29	1,895,783	.22	228,800,379	26.51
1921	28,344,659	3.23	1,956,326	.22	194,621,710	22.15
1922	26,620,740	2.97	1,960,184	.22	166,466,109	18.56

Years.	Dominion Notes[1] $1, $2, $4, $5 and fractionals.[2]		Totals.		
	Amount.[3]	Per Capita.	Amount.	Per Capita.	Index Number per Capita.[4]
	$	$	$	$	
1900	9,997,044	1.88	65,119,251	12.24	100·0
1901	10,595,169	1.97	70,152,727	13.06	106·7
1902	11,442,138	2.07	75,615,089	13.67	111·7
1903	12,321,172	2.17	82,999,447	14.63	119.5
1904	12,813,912	2.20	85,393,003	14.66	119·8
1905	13,499,894	2.25	88,804,740	14.82	121·1
1906	14,797,483	2.40	97,564,017	15.81	129·2
1907	15,973,227	2.53	105,111,373	16.68	136·3
1908	15,615,082	2.41	100,430,588	15.47	126·4
1909	16,235,774	2.43	104,280,702	15.58	127·3
1910	18,098,111	2.62	115,513,429	16.70	136·4
1911	21,497,429	2.98	128,171,943	17.79	145·3
1912	27,277,341	3.70	145,469,387	19.75	161·3
1913	29,067,278	3.86	153,360,822	20.37	166·4
1914	26,964,063	3.51	151,253,711	19.66	160·6
1915	25,881,570	3.29	150,819,823	19.18	156·7
1916	27,857,543	3.47	175,640,779	21.86	178·6
1917	31,221,311	3.82	215,249,981	26.31	214·9
1918	34,146,836	4.10	258,252,022	31.01	253·3
1919	35,492,643	4.19	283,182,874	33.40	272·8
1920	37,272,725	4.22	296,353,737	34.33	280·5
1921	33,825,582	3.85	258,748,277	29.44	240·5
1922	31,888,024	3.56	226,935,057	25.31	206·8

[1] Dominion Notes of larger denominations in hands of banks not included.
[2] Includes Provincial Notes (denominations of $1, 2, 5, 10 and 20) amounting to $25,622 in 1900 and reduced gradually to $24,560 in 1922.
[3] Yearly average. [4] Per capita circulation in 1900=100.

2.—Banking in Canada.

Historical.—In the early days of banking in older countries, one of the chief functions of banks was to issue promissory notes payable to the bearer on demand; where the bank's credit was good these notes passed freely from hand to hand, creating an auxiliary uniform circulating medium, which in various cases was preferred to that issued by national governments.

The lack of a uniform circulating medium in Canada was felt by the merchants of Montreal toward the end of the eighteenth century, and the prospectus of a proposed bank of issue to be known as the Canada Banking Company was issued in 1792. This scheme, however, was allowed to drop, while a second project in 1808, for the incorporation of a Bank of Canada, failed to secure the assent of the Legislature of Lower Canada.

At the close of the war of 1812, the Army Bill currency was withdrawn, and public attention once more turned to the expediency of securing a currency through the establishment of banks. The Bank of Montreal began business toward the end of 1817, with a charter based on that of the First Bank of the United States. In the following year the Quebec Bank was established, as well as the Bank of Canada at Montreal and the Bank of Upper Canada at Kingston. The three Lower Canadian institutions, commencing as private banks, obtained their charters in 1822, while the Bank of Upper Canada, also a private institution, was superseded by a second Bank of Upper Canada, established at York (Toronto) as a chartered bank in 1821. Meanwhile the Bank of New Brunswick had been incorporated in 1820, while in Nova Scotia the Halifax Banking Co. (private) had commenced business in 1825, and the Bank of Nova Scotia received a regular charter in 1832. The Bank of British North America, previously incorporated in Great Britain, commenced business in Canada in 1836, while Molson's Bank was established in 1853, the Bank of Toronto in 1855, the Banque Nationale in 1860 and the Banque Jacques-Cartier (now the Banque Provinciale du Canada) in 1862. The Union Bank was established in 1866, the Canadian Bank of Commerce in 1867, the Merchants' Bank of Halifax (now the Royal Bank) in 1869, the Dominion Bank in 1871, the Bank of Hamilton in 1872, the Banque d'Hochelaga in 1873, the Bank of Ottawa in 1874, the Imperial Bank in 1875 and the Standard Bank in 1876.

The Canadian Banking System.[1]—A brief *résumé* of the Canadian Banking system should emphasize its growth from the beginning as closely related to the Montreal produce and export trade, its development of the branch bank system in order to meet the demands of a rapidly moving frontier of settlement, its adaptation to the requirements of the grain and cattle trade of the west, and the consolidation during late years of the features which tended most towards its early success. Development of a stable system has been accompanied by failures, particularly marked about the middle of the 19th century, but progress has nevertheless been steady, based on sound principles and adapted as closely as could be to the particular needs of the country.

The branch bank forms perhaps the most distinctive feature of the Canadian system as it exists today, and for a country such as Canada, vast in area and with a small population, the plan has proved a good one. A result of the growth of branch banks has been the partially centralized system that now obtains—centralized as to banks, of which there are now 16[2], rather than as to districts, as in the partially centralized system of the United States.

[1] For details regarding Canadian bank note issue, see page 813.
[2] Nov. 30, 1923.

A second peculiarity of the system may be noted—the existence and operation of the Canadian Bankers' Association. Through this body, which was incorporated in 1900, and acts under the authority of the Dominion Treasury Board, co-operation of individual banks is facilitated and encouraged. The Association supervises clearing house transactions, appoints curators to supervise the affairs of banks which have suspended business and oversees the printing and issue of notes to its members. Adherence to similar principles and a linking together of the credit of the system result from the co-operation secured through the association.

The elimination of weaker banks and their amalgamation with more stable ones has been a progressive move towards greater efficiency. Co-operation between the banks and the Dominion Government has been made permanent through the medium of periodic returns and the regulation of note issues and reserves.

Apart from the many detailed services rendered to its clients, the Canadian banking system may be said, in addition, to perform three main functions. In brief, they are as follows —

1. To put into circulation the paper currency which forms the circulating medium for small exchanges.
2. To provide a mechanism of exchange by the issue of bills of exchange, etc.
3. To form a means by which the credit of the banks and unused deposits may be put to immediate productive use.

Banking Legislation.—Note issue was formerly considered as the chief function of the banks, and banking legislation dealt mainly with such issue. In 1830 the Banking Act was amended so that the total amount of notes of less than $5 in circulation might not at any one time exceed one-fifth of the paid up capital, that no notes under $1 should be issued and that all issues of less than $5 might be limited or suppressed by the Legislature. In 1841, in the first session of the Canadian Legislature after the Union, the Banking Act imposed a tax of one p. c. upon the bank note circulation, together with provisions for the double liability of shareholders. In 1850 a new Act prohibited any bank other than those incorporated by Act of Parliament or Royal Charter from issuing notes. The tax on circulation was abolished, and instead a deposit with the Government of $100,000 in provincial debentures was required; for the first time monthly bank statements were required to be furnished to the Government.

In 1871 the first Dominion Bank Act provided for a minimum capital of $500,000, the restriction of bank note issue to notes of $4 and upwards, the redemption by banks of their own notes at any of their offices, the limitation of dividends until a reasonably large reserve fund had been accumulated, the holding of Dominion notes to the extent of at least one-third of the cash reserve, the prohibition of a bank lending money on its own stock; the forfeiture of the charter of any bank which left any of its liabilities unpaid for 90 days; also, in order that the double liability might be effectively enforced, banks were required to transmit certified lists of shareholders to the Minister of Finance. The charters were granted for ten years only, so as to facilitate the contemplated decennial revisions of the Act.

The first revision of the Bank Act took place in 1881. The noteholder was now recognized as prior creditor, the banks were prohibited from issuing notes under $5, while notes of higher denominations were to be multiples of this sum. Dominion notes were to constitute not less than 40 p.c. of the banks' cash reserve, and banks were upon request to pay in Dominion notes sums not exceeding $50.

At the second revision of the Bank Act (1891), the chief change was the establishment of the Bank Note Circulation Redemption Fund, founded as a consequence of

the losses to which the noteholders of insolvent banks were still subjected through being unable to turn their notes into cash. It was provided that bank notes should bear interest from the day of suspension of the bank until the date when their redemption was undertaken by the liquidator. If this was not done within two months, the Minister of Finance was authorized to redeem them out of the Bank Circulation Redemption Fund. Such expenditure, if not made good out of the assets of the failed bank, was to be provided by contributions from the other banks *pro rata* to circulation.

At the third regular revision of the Bank Act, in 1901, the Canadian Bankers' Association was given authority to appoint an inspector to supervise the bank note circulation and see that no bank issued circulation in excess of its paid-up capital. In 1908 provision was made for emergency circulation during the crop-moving season from October to January, during which banks were allowed to issue excess circulation up to 15 p.c. of their combined paid-up capital and reserve or rest fund, this emergency circulation to be taxed at the rate of 5 p.c. per annum. In 1912 the period during which emergency circulation might be issued was extended to the six months from September to February inclusive.

At the fourth revision, which took place in 1913, the Bank Act was amended by providing for the establishment of central gold reserves in which banks might deposit gold or Dominion notes, issuing additional notes of their own against such deposit. A shareholders' audit was also provided for. As a consequence of the war, the provision for emergency circulation was extended to cover the whole year in 1914, while banks were authorized to make payments in their notes instead of in gold or Dominion notes.

The fifth revision of 1923 (13-14 Geo. V, c. 32) has resulted in numerous important changes. The qualifications of provisional directors are re-defined in sec. 11, while provision is made for keeping records of attendance at directors' meetings and bringing them to the notice of shareholders. Annual and special statements are given further attention and more complete returns are required from the banks, particularly in cases where other operations than banking are carried on (sec. 54). Detailed provisions are added regarding a shareholders' audit of the banks' affairs (sec. 56), while the personal liability of directors in case of distribution of profits in excess of legal limits is fixed by sec. 59. Regulations regarding loans are amended (sec. 76), and annual returns to the Minister regarding real and immovable property are required (sec. 79). Registration of security for loans is provided for (sec. 88a); monthly and special returns are to be made when called for by the Minister (sec. 112); certain loans are prohibited (sec. 146); and the punishment of directors and other bank officials who knowingly make false statements of a bank's position is stipulated in sec. 153.

Banking Statistics.—In Table 46 is given a historical summary of Canadian banking business since Confederation. In order to afford a clearer view of the nature of banking transactions in Canada, bank liabilities have been classified in two main groups, liabilities to shareholders and liabilities to the public, the latter group only being considered when determining the ordinary financial position of any such institution. Assets are divided into four groups, other assets being included in the total. As of interest to students of banking practice, the proportionate development of capital and reserve funds may be pointed out, also the great increase in the proportion of liabilities to the public to total liabilities and the gradually increasing percentage of liabilities to the public to total assets.

46.—Historical Summary showing Development of the Canadian Banking Business, calendar years 1867-1922.

Calendar Years.	LIABILITIES.				
	Liabilities to Shareholders.		Liabilities to the Public.		
	Capital paid up.	Rest or Reserve Fund.	Notes in Circulation.	Total on Deposit.[1]	Total Liabilities to the Public.
	$	$	$	$	$
1867 (6 mos.)	30,926,470	–	9,346,081	31,375,316	43,273,969
1868	30,507,447	–	9,350,646	33,653,594	45,144,854
1869	30,782,637	–	9,539,511	40,028,090	50,940,226
1870	33,031,249	–	15,149,031	48,763,205	65,685,870
1871	37,095,340	–	20,914,637	56,287,391	80,250,974
1872	45,190,085	–	25,296,454	61,481,452	90,864,688
1873	54,690,561	–	27,165,878	65,426,042	98,982,668
1874	60,388,340	–	27,904,963	77,113,754	116,412,392
1875	64,619,513	–	23,035,639	74,642,446	104,609,356
1876	66,804,398	–	21,245,935	72,852,686	99,614,014
1877	65,206,009	–	20,704,338	74,166,287	99,810,731
1878	63,682,863	–	20,475,586	70,856,253	95,538,831
1879	62,737,276	–	19,486,103	73,151,425	96,760,113
1880	60,052,117	–	22,529,623	85,303,814	111,838,941
1881	59,534,977	–	28,516,692	94,346,481	127,176,249
1882	59,799,644	–	33,582,080	110,133,124	149,777,214
1883	61,390,118	–	33,283,302	107,648,383	145,938,095
1884	61,579,021	18,149,193	30,449,410	102,398,228	137,493,917
1885	61,711,566	17,879,716	30,720,762	104,014,660	138,762,695
1886	61,662,093	17,817,693	31,030,499	111,449,365	146,954,260
1887	60,860,561	17,873,582	32,478,118	112,656,985	149,704,402
1888	60,345,035	18,529,911	32,205,259	125,136,473	163,990,797
1889	60,229,752	19,766,426	32,207,144	134,650,732	173,029,602
1890	59,974,902	21,127,838	32,834,511	135,548,704	173,207,587
1891	60,700,697	22,821,501	33,061,042	148,396,968	187,332,325
1892	61,626,311	24,511,709	33,788,679	166,668,471	208,062,169
1893	62,009,346	25,837,753	33,811,925	174,776,722	217,195,975
1894	62,063,371	27,041,235	31,166,003	181,743,890	221,066,724
1895	61,800,700	27,273,500	30,807,041	190,916,939	229,794,322
1896	62,043,173	26,526,632	31,456,297	193,616,049	232,338,086
1897	62,027,703	27,087,782	34,350,118	211,788,096	252,660,708
1898	62,571,920	27,627,520	37,873,934	236,161,062	281,076,656
1899	63,726,399	28,958,989	41,513,139	266,504,528	318,624,033
1900	65,154,594	32,372,394	46,574,780	305,140,242	356,394,095
1901	67,035,615	36,249,145	50,601,205	349,573,327[2]	420,003,743
1902	69,869,670	40,212,943	55,412,598	390,370,493[2]	466,963,829
1903	76,453,125	47,761,536	60,244,072	424,167,140[2]	507,527,550
1904	79,234,191	52,082,335	61,769,888	470,265,744[2]	554,014,076
1905	82,655,828	56,474,124	64,025,643	531,243,476[2]	618,678,633
1906	91,035,604	64,002,266	70,638,870	605,968,513[2]	713,790,553
1907	95,953,732	69,806,892	75,784,482	654,839,711[2]	769,026,924
1908	96,147,526	72,041,265	71,401,697	658,367,015[2]	762,077,184
1909	97,329,333	75,887,695	73,943,119	783,298,880[2]	882,598,547
1910	98,787,929	79,970,346	82,120,303	909,964,839[2]	1,019,177,601
1911	103,009,256	88,892,256	89,982,223	980,433,788[2]	1,097,661,393
1912	112,730,943	102,090,476	100,146,541	1,102,910,383[2]	1,240,124,354
1913	116,297,729	109,129,393	105,265,336	1,126,871,523[2]	1,287,372,534
1914	114,759,807	113,130,626	104,600,185	1,144,210,363[2]	1,309,944,006
1915	113,982,741	113,020,310	105,137,092	1,198,340,315[2]	1,353,629,123
1916	113,175,353	112,989,541	126,691,913	1,418,035,429[2]	1,596,905,337
1917	111,637,755	113,560,997	161,029,606	1,643,203,020[2]	1,866,228,236
1918	110,618,504	114,041,500	198,645,254	1,912,395,780[2]	2,184,359,820
1919	115,004,960	121,160,774	218,919,261	2,189,428,885[2]	2,495,582,568
1920	123,617,120	128,756,690	228,800,379	2,438,079,792[2]	2,784,068,698
1921	129,096,339	134,104,030	194,621,710	2,264,586,736[2]	2,556,454,190
1922	125,456,485	129,627,270	166,466,109	2,120,997,030[2]	2,364,822,657

NOTE.—The statistics in this table are averages computed from the twelve monthly returns.

[1] Includes the deposits of Federal and Provincial Governments.

[2] Includes amounts deposited elsewhere than in Canada, not included in deposits prior to 1901.

46.—Historical Summary showing Development of the Canadian Banking Business, calendar years 1867-1922.—concluded.

Calendar Years.	ASSETS.					Percentage of Liabilities to the Public to Total Assets.
	Specie and Dominion Notes (including Deposits in Central Gold Reserves 1913-1922.)	Dominion and Provincial Government Securities.	Municipal Securities in Canada and Public Securities elsewhere than in Canada.	Total Loans.	Total Assets.	
	$	$	$	$	$	p.c.
1867 (6 mos.)	–	–	–	53,889,703	78,294,670	55·27
1868	–	–	–	52,299,050	79,860,976	56·53
1869	–	–	–	56,433,953	86,283,693	59·04
1870	–	–	–	66,276,961	103,197,103	63·65
1871	–	–	–	84,799,841	125,273,631	64·06
1872	–	–	–	106,744,665	148,862,445	61·04
1873	–	–	–	119,274,317	166,056,595	56·60
1874	–	–	–	131,680,111	187,921,031	61·95
1875	–	–	–	136,029,307	186,255,330	56·17
1876	–	–	–	127,621,577	183,499,801	54·29
1877	–	–	–	125,681,658	181,019,194	55·14
1878	–	–	–	119,682,659	175,450,274	54·45
1879	–	–	–	113,485,108	173,548,490	55·75
1880	–	–	–	102,166,115	184,276,190	60·69
1881	–	–	–	116,953,497	200,613,879	63·39
1882	–	–	–	140,077,194	227,426,835	65·86
1883	–	–	–	143,944,957	228,084,650	63·98
1884	–	–	–	130,490,053	219,998,642	62·50
1885	–	–	–	126,827,792	219,147,080	63·32
1886	–	–	–	132,833,313	228,061,872	64·44
1887	–	–	–	139,753,755	230,393,072	64·98
1888	–	–	–	141,002,373	243,504,164	67·35
1889	–	–	–	149,958,980	253,789,803	68·18
1890	–	–	–	153,301,335	254,546,329	68·05
1891	–	–	–	171,082,677	269,307,032	69·56
1892	17,794,201	–	–	193,455,883	291,635,251	71·34
1893	19,714,648	–	–	206,623,042	302,696,715	71·75
1894	22,371,954	–	–	204,124,939	307,520,020	71·87
1895	22,992,872	–	–	203,730,800	316,536,510	72·50
1896	22,318,627	–	–	213,211,996	320,937,643	72·39
1897	24,178,151	–	–	212,014,635	341,163,505	74·06
1898	25,330,564	–	–	223,806,320	370,583,991	75·86
1899	26,682,970	–	–	251,467,076	412,504,768	77·24
1900	29,047,382	–	–	279,279,761	459,715,065	77·52
1901	32,088,501	11,331,385	13,031,176	388,299,888	531,829,324	78·97
1902	35,478,598	9,804,998	14,487,632	430,662,670	585,761,109	79·72
1903	42,510,574	11,186,607	14,896,472	472,019,689	641,543,226	79·11
1904	50,307,871	10,705,202	15,560,145	509,011,993	695,417,756	79·67
1905	56,590,323	8,833,626	18,820,985	559,814,918	767,490,183	80·61
1906	61,287,581	9,360,614	20,460,670	655,869,879	878,512,076	81·25
1907	70,550,520	9,546,927	21,198,817	709,975,274	945,685,708	81·32
1908	80,654,276	9,522,743	19,788,937	670,170,833	941,290,619	80·96
1909	95,558,461	11,653,798	21,707,363	762,195,546	1,067,007,534	82·72
1910	104,735,626	14,741,621	21,696,987	870,100,890	1,211,452,351	84·13
1911	120,146,690	10,637,580	22,848,170	926,909,616	1,303,131,260	84·23
1912	132,853,405	9,388,968	22,586,119	1,061,843,991	1,470,065,478	84·36
1913	141,872,884	9,995,237	23,183,162	1,111,993,263	1,530,093,671	84·14
1914	165,845,957	11,697,603	22,707,738	1,101,880,924	1,555,676,395	84·20
1915	208,438,854	12,814,898	31,553,091	1,066,252,854	1,596,424,643	84·75
1916	230,113,831	29,717,007	117,902,686	1,135,866,531	1,839,286,709	86·82
1917	265,389,567	131,078,854	183,341,125	1,219,161,252	2,111,559,555	88·38
1918	351,762,841	162,821,026	252,936,568	1,339,660,669	2,432,331,418	89·81
1919	370,775,723	214,621,625	256,270,715	1,552,971,202	2,754,568,118	90·60
1920	367,165,054	120,356,255	210,826,991	1,935,449,637	3,064,133,843	90·86
1921	335,081,032	166,688,146	156,552,503	1,781,184,115	2,841,782,079	89·96
1922	305,522,425	198,826,031	90,131,491	1,643,643,443	2,638,776,483	89·62

NOTE.—The statistics in this table are averages computed from the twelve monthly returns.

Bank Assets and Liabilities.—Tables 47 and 48 show the assets and liabilities of Canadian chartered banks for the four years 1919 to 1922, the figures being yearly averages of the totals shown in the monthly statements of the Minister of Finance. Attention may be drawn to the reduction by almost $70,000,000 of total deposits in the central gold reserves, the increase by almost $40,000,000 of balances due from foreign banks and correspondents, and the decrease of $156,000,000 in the holdings of Canadian municipal and foreign securities. A corresponding decrease in liabilities, however, of $130,000,000 is the result of the reduction in notes payable, deposits due to the Dominion Government and demand deposits in Canada, offset to some extent by increases in Canadian savings deposits and foreign deposits. Changes in the character and volume of assets and liabilities may, on the whole, be ascribed to deflation throughout the country, and to the re-establishing of normal banking practice.

47.—Assets of Chartered Banks for calendar years 1919-1922.

Assets.	1919.	1920.	1921.	1922.
	$	$	$	$
Quick Assets—				
Current gold and subsidiary coin	80,684,931	81,471,916	80,671,931	80,776,592
Dominion notes	176,744,958	177,990,416	174,802,401	170,393,300
Deposit with Minister of Finance for security of note circulation	6,054,419	6,122,715	6,417,287	6,493,593
Deposit in central gold reserves	112,679,167	107,702,722	79,606,700	54,352,533
Notes of other banks	30,046,099	45,640,095	51,267,964	40,571,207
Cheques of other banks	102,492,254	130,277,410	111,726,865	104,878,651
Deposits made with, and balances due from other banks in Canada	5,823,388	5,697,820	6,179,469	5,243,496
Due from banks and banking correspondents in the United Kingdom	12,359,426	17,669,923	12,857,830	10,309,844
Due from banks and banking correspondents elsewhere than in Canada and the United Kingdom	50,904,693	62,097,682	60,885,266	87,972,048
Total Quick Assets	577,789,335	634,670,699	584,415,713	560,991,264
Other Liquid Assets—				
Dominion Government and Provincial Government securities	214,621,625	120,356,255	166,688,146	198,826,031
Canadian municipal securities, and British, foreign and colonial public securities other than Canadian	256,270,715	210,826,991	156,552,503	90,131,491
Railway and other bonds, debentures and stocks	54,429,301	48,031,228	45,728,878	43,208,758
Call and short (not exceeding thirty days) loans in Canada on stocks, debentures and bonds	96,673,179	118,956,035	109,542,625	101,320,268
Call and short (not exceeding thirty days) loans elsewhere than in Canada	163,227,204	200,098,050	172,137,325	178,457,564
Total other Liquid Assets	785,222,024	698,268,559	650,649,477	611,944,112
Other Assets—				
Other current loans and discounts in Canada	1,091,849,150	1,342,763,470	1,246,018,266	1,122,255,707
Other current loans and discounts elsewhere than in Canada	140,200,101	186,891,995	156,571,063	149,586,461
Loans to the Government of Canada	–	–	158,750	–
Loans to provincial governments	8,214,314	13,945,219	12,806,347	9,556,612
Loans to cities, towns, municipalities and school districts	48,546,827	67,839,214	77,140,465	74,627,370
Overdue debts	4,260,427	4,952,320	6,809,940	7,839,461
Real estate other than bank premises	5,835,339	4,781,361	4,357,257	4,977,208
Mortgages on real estate sold by the bank	2,354,169	2,679,141	3,070,228	3,682,344
Bank premises at not more than cost, less amounts (if any) written off	54,499,498	58,111,876	65,808,576	70,909,881
Liabilities of customers under letters of credit as per contra	33,248,321	46,054,619	30,079,462	18,358,731
Other assets not included under the foregoing heads	2,548,613	3,175,370	3,896,535	4,047,332
Total Other Assets	1,391,556,759	1,731,194,585	1,606,716,889	1,465,841,107
Grand Total Assets	**2,754,568,118**	**3,064,133,843**	**2,841,782,079**	**2,638,776,483**

NOTE.—The statistics in this table are averages computed from the twelve monthly returns in each year.

48.—Liabilities of Chartered Banks for calendar years 1919-1922.

Liabilities.	1919.	1920.	1921.	1922.
Liabilities to the Public—	$	$	$	$
Notes in circulation	218,919,261	228,800,379	194,621,710	166,466,109
Balance due to Dominion Government after deducting advances for credits, pay lists, etc.	181,768,998	188,360,129	109,405,020	83,669,096
Balances due to provincial governments	22,049,660	21,384,185	28,794,562	28,833,212
Deposits by the public payable on demand in Canada	621,676,065	653,862,869	551,914,643	502,781,234
Deposits by the public payable after notice or on a fixed day in Canada	1,125,202,403	1,239,308,076	1,289,347,063	1,191,637,004
Deposits elsewhere than in Canada	238,731,784	335,164,532	285,125,448	314,076,484
Deposits made by and balances due to other banks in Canada	10,641,494	11,830,949	11,756,766	9,931,819
Due to banks and banking correspondents in the United Kingdom	5,908,764	7,057,506	8,078,047	9,775,026
Due to banks and banking correspondents elsewhere than in Canada and the United Kingdom	29,985,104	40,380,320	32,532,361	28,762,762
Bills payable	3,821,080	8,155,523	11,494,432	7,484,191
Acceptances under letters of credit	33,248,324	45,962,754	30,079,458	18,332,804
Liabilities not included under foregoing heads	3,629,588	3,718,070	3,304,608	3,072,013
Total Liabilities to the Public	**2,495,582,525**	**2,783,985,292**	**2,556,454,118**	**2,364,821,754**
Liabilities to Shareholders—				
Capital paid up	115,004,960	123,617,120	129,096,339	125,456,485
Amount of rest or reserve fund	121,160,774	128,756,690	134,104,030	129,627,270
Total Liabilities to Shareholders	**236,165,734**	**252,373,810**	**263,200,369**	**255,083,755**
Grand Total Liabilities	**2,731,748,259**	**3,036,359,102**	**2,819,654,487**	**2,619,905,509**

NOTE.—The statistics in this table are averages computed from the twelve monthly returns in each year.

In Tables 49 and 50 bank assets on Dec. 30, 1922, are given by individual banks, being classified, in addition, according to their nature and availability in meeting liabilities. The tables illustrate, in addition to the comparative volume of business done by the various banks, particular types of transactions carried on by the individual units in the system.

49.—Assets of each of the Chartered Banks of Canada, December 30, 1922.

Chartered Banks.	Specie.	Dominion Notes.	Deposit in Central Gold Reserves.	Due from other Banks.	Securities.	Loans and Discounts.			Total Assets.[1]
						Call Loans in Canada.	Current Loans in Canada.	Call and Current Loans outside of Canada.	
	$	$	$	$	$	$	$	$	$
Bank of Montreal	48,765,266	54,177,208	18,000,000	45,274,571	70,189,635	6,970,275	225,129,734	119,472,263	630,758,349
Bank of Nova Scotia	11,419,548	25,115,653	6,000,000	15,088,958	41,198,322	7,414,190	81,381,654	22,831,654	221,647,324
Bank of Toronto	978,778	5,970,232	2,500,000	7,411,821	18,779,010	7,857,559	44,005,725	–	93,984,762
Molsons Bank	582,726	5,681,859	1,000,000	6,778,524	8,927,049	4,592,648	38,006,534	–	71,430,682
Banque Nationale	424,964	1,068,701	1,700,000	3,410,522	7,132,934	455,000	29,250,189	–	48,724,316
Banque Provinciale du Canada	170,829	253,219	–	4,502,864	7,420,444	4,659,196	13,965,713	–	34,394,798
Union Bank of Canada	1,113,574	7,288,477	2,000,000	11,201,740	26,092,281	5,183,764	61,379,296	9,520,643	138,314,061
Canadian Bank of Commerce	11,262,645	20,986,457	10,000,000	31,103,424	44,928,685	17,409,149	170,761,049	47,297,207	386,854,452
Royal Bank of Canada	11,554,449	25,239,258	9,000,000	67,600,552	45,131,035	15,184,618	140,044,865	131,648,120	473,021,818
Dominion Bank	2,075,673	13,651,168	1,700,000	11,797,270	15,551,074	5,808,605	62,785,326	7,783,494	130,064,364
Bank of Hamilton[2]	920,785	3,121,952	800,000	5,400,838	6,015,671	8,169,107	39,722,172	450,000	72,376,667
Standard Bank of Canada	1,759,602	4,975,102	1,500,000	6,039,554	10,780,645	4,614,658	44,060,321	535,000	78,927,895
Banque d'Hochelaga	527,184	2,325,049	2,000,000	6,631,802	8,156,717	4,953,343	34,830,550	500,000	66,804,977
Imperial Bank of Canada	1,871,954	10,442,782	5,002,533	10,089,718	14,191,305	3,768,021	55,586,649	3,250,000	119,186,481
Home Bank of Canada[3]	271,308	1,216,022	–	2,047,342	2,869,378	1,286,649	15,277,542	23,193	24,362,367
Sterling Bank of Canada	74,264	1,079,917	–	1,345,476	13,211,063	56,798	7,135,470	–	23,815,460
Weyburn Security Bank	15,756	93,764	–	1,379,849	13,750	–	1,904,105	–	3,969,331
Total	**93,789,305**	**182,686,820**	**61,202,533**	**237,104,825**	**340,588,998**	**98,383,580**	**1,065,226,894**	**343,310,974**	**2,618,638,104**

[1] Other Assets not included under the foregoing heads. [2] Now incorporated with Canadian Bank of Commerce. [3] Suspended business in 1923.

50.—Liabilities of each of the Chartered Banks of Canada, December 30, 1922.

Chartered Banks.	Capital (paid up).	Reserve.	Notes in Circulation.	Due to Dominion and to Provincial Governments.	Deposits.			Due to Other Banks.	Total Liabilities.[1]
					Demand in Canada.	Notice in Canada.	Outside of Canada.		
	$	$	$	$	$	$	$	$	$
Bank of Montreal	27,250,000	27,250,000	41,448,263	17,452,729	131,551,498	284,896,885	88,142,747	3,511,814	572,904,597
Bank of Nova Scotia	10,000,000	19,500,000	15,399,640	2,139,117	32,130,092	105,858,066	32,297,325	2,698,187	191,974,161
Bank of Toronto	5,000,000	6,000,000	7,023,003	2,354,223	25,776,704	44,714,974	–	1,014,092	81,499,285
Molsons Bank	4,000,000	5,000,000	4,806,901	1,029,867	13,657,546	40,682,905	–	693,142	61,745,801
Banque Nationale	2,924,190	400,000	4,958,770	3,330,032	5,075,978	24,968,028	6,458,455	139,988	45,306,605
Banque Provinciale du Canada	3,000,000	1,500,000	3,231,879	196,283	4,346,037	21,877,141	–	7,182	29,821,149
Union Bank of Canada	8,000,000	6,000,000	9,490,374	5,304,785	32,128,920	63,646,054	3,311,675	6,075,129	123,792,286
Canadian Bank of Commerce	15,000,000	15,000,000	23,472,943	19,351,927	97,914,882	152,072,276	43,385,545	11,455,828	354,393,863
Royal Bank of Canada	20,400,000	20,400,000	27,804,932	8,318,838	83,734,621	176,021,245	111,490,947	13,630,973	430,575,018
Dominion Bank	6,000,000	7,000,000	7,571,461	6,066,403	29,566,414	63,957,103	3,264,074	4,231,549	116,064,727
Bank of Hamilton[2]	5,000,000	4,850,000	5,410,077	741,429	15,552,027	39,247,175	–	601,128	61,704,737
Standard Bank of Canada	4,000,000	5,000,000	5,432,760	1,245,444	17,145,914	41,771,146	–	3,343,147	69,103,544
Banque d'Hochelaga	4,000,000	4,000,000	5,945,549	383,789	10,218,350	41,262,782	–	531,425	58,428,081
Imperial Bank of Canada	7,000,000	7,500,000	10,552,781	4,014,722	27,857,043	59,537,648	–	947,215	103,126,311
Home Bank of Canada[3]	1,960,284	550,000	1,935,125	1,466,743	5,822,658	11,855,815	–	776,282	21,856,625
Sterling Bank of Canada	1,232,900	500,000	1,246,166	5,098,653	3,841,112	11,023,574	–	734,598	21,948,395
Weyburn Security Bank	524,560	225,000	470,727	88,319	1,293,260	1,310,779	–	11,341	3,219,771
Total	**125,291,934**	**130,675,000**	**176,201,351**	**78,583,303**	**537,613,056**	**1,184,703,596**	**288,350,768**	**50,403,020**	**2,347,464,956**

[1]Other Liabilities not included under the foregoing heads. [2] Now incorporated with Canadian Bank of Commerce. [3] Suspended business in 1923.

Deposits, Loans and Discounts.—As an index of the course of banking business, of the nature of many transactions undertaken and of the general security of bank assets, loans and discounts are of great value. They illustrate clearly the channels into which a large proportion of the potential earning power of the banks is directed, and, in the comparison between investments made in lending operations inside and outside of Canada, as well as in the duration of loans, afford essential information regarding the conduct by a bank of one of its most important activities.

Bank deposits, to a large extent the product of lending operations, by which credit is advanced on security, followed by the deposit of the proceeds of a loan, are also of considerable importance, and on account of their derivation are one of the most valuable records of the volume of business done at any time. Actual deposits of cash are, of course, included with the amounts deposited after the granting of loans, and are very small in comparison.

Tables 51 and 52 following, give the deposits and loans of Canadian chartered banks for the years 1918 to 1922. A general reduction in the volume of business done is apparent in all branches except those with customers in foreign countries; foreign deposits increased, during the year 1922, by some $29,000,000, while call and short loans increased in the same year from $172,137,325 to $178,457,564.

51.—Deposits in Chartered Banks in Canada and elsewhere, for the calendar years 1918-1922.

Items.	1918.	1919.	1920.	1921.	1922.
	$	$	$	$	$
Deposits by the public of Canada—					
Payable on demand	587,342,904	621,676,065	653,862,869	551,914,643	502,781,234
Payable after notice or on a fixed day	966,341,499	1,125,202,403	1,239,308,076	1,289,347,063	1,191,637,004
Deposits elsewhere than in Canada	206,065,621	238,731,784	335,164,532	285,125,448	314,076,484
Balances due to Dominion and Provincial Governments	152,645,756	203,818,633	209,744,315	138,199,582	112,502,308
Total Deposits	**1,912,395,780**	**2,189,428,885**	**2,438,079,792**	**2,264,586,736**	**2,120,997,030**

NOTE.—The statistics in this table are averages computed from monthly returns in each year.

52.—Loans of Chartered Banks in Canada and elsewhere, for the calendar years 1918-1922.

Items.	1918.	1919.	1920.	1921.	1922.
	$	$	$	$	$
Call and short loans on stocks and bonds in Canada	77,555,410	96,673,179	118,956,035	109,542,625	101,320,268
Call and short loans elsewhere than in Canada	162,333,308	163,227,204	200,098,050	172,137,325	178,457,564
Current loans in Canada[1]	982,822,203	1,140,395,977	1,410,602,684	1,323,158,731	1,196,883,077
Current loans elsewhere than in Canada	106,913,067	140,200,101	186,891,995	156,571,063	149,586,461
Loans to governments	5,236,593	8,214,314	13,945,219	12,965,097	9,556,612
Overdue debts	4,800,088	4,260,427	4,952,320	6,809,274	7,839,461
Total Loans	**1,339,660,669**	**1,552,971,202**	**1,935,446,303**	**1,781,184,115**	**1,643,643,443**

NOTE.—The statistics in this table are averages computed from monthly returns in each year.
[1] Includes loans to cities, towns, municipalities and school districts.

Bank Reserves.—The Bank Act contains no specific provisions as to the amount of gold to be held either against note circulation or the general business of the bank. It requires, however, that 40 p.c. of whatever reserve a bank finds expedient to carry shall be in Dominion notes. A second provision instructs the Minister of Finance to arrange for the delivery of Dominion notes to any bank in exchange for specie. Thus the gold reserve against Dominion notes, to the extent that the notes are held by the banks, is reserve against banking operations, the Dominion Government being the custodian of the gold for the banks. The other cash element in bank reserves is specie in hand. In addition to this cash on hand, Canadian banks carry three other kinds of asset which are regarded as reserves, being funds more or less immediately available for the liquidation of liabilities. These are (1) cash balances in banks outside of Canada; (2) call and short loans in New York (the favourite call loan market); and (3) readily marketable securities. These are shown together with the total and net liabilities in Table 53. In Table 54 the ratio to net liabilities of each element of the reserve is shown.

53.—Bank Reserves, with Liabilities, 1892-1922.

Years.	Specie and Dominion Notes.	Cash Due from			Call and short loans elsewhere than in Canada.
		Banks in the United Kingdom.	Banks elsewhere than in Canada and United Kingdom.	Total.	
	$	$	$	$	$
1892	17,794,201	2,058,538	20,728,669	22,787,207	–
1893	19,714,648	2,651,533	17,318,101	19,969,634	–
1894	22,371,954	3,439,354	18,904,416	22,343,770	–
1895	22,992,872	4,915,458	23,183,161	28,098,619	–
1896	22,318,627	7,147,788	17,207,798	24,355,586	–
1897	25,178,151	11,149,437	22,060,471	33,209,908	–
1898	25,330,564	11,078,459	21,849,137	32,927,596	–
1899	26,682,970	11,872,548	24,136,270	36,008,818	–
1900	29,047,382	6,972,195	15,443,217	22,415,412	28,228,469[1]
1901	32,088,501	5,598,939	12,811,524	18,410,463	40,020,238
1902	35,478,598	6,598,159	13,519,799	20,117,958	46,162,659
1903	42,510,574	5,638,954	14,192,232	19,831,186	38,025,662
1904	50,307,871	7,523,615	16,817,357	24,340,972	41,212,007
1905	56,590,323	9,960,560	19,201,939	29,162,499	51,452,955
1906	61,287,581	8,877,979	16,801,119	25,679,098	59,363,639
1907	70,550,520	6,027,157	15,363,728	21,390,885	52,907,513
1908	80,654,276	9,828,186	30,822,761	40,650,947	60,764,075
1909	95,558,461	10,311,864	31,779,144	42,091,008	119,728,263
1910	104,735,696	18,892,833	28,301,602	47,194,435	112,777,530
1911	120,146,690	21,122,092	29,695,985	50,818,077	91,097,704
1912	132,853,405	21,338,926	28,894,103	50,233,029	105,718,070
1913	135,267,623	13,329,642	28,238,329	41,567,971	98,602,615
1914	159,775,124	12,230,533	36,932,958	49,163,491	112,438,696
1915	200,113,021	20,824,559	43,781,939	64,606,498	118,896,692
1916	207,797,164	24,025,192	72,923,228	96,948,420	164,786,760
1917	210,475,400	17,885,648	53,021,952	70,907,600	157,430,643
1918	256,656,174	10,973,606	47,419,961	58,393,567	162,233,308
1919	257,429,889	12,359,426	50,904,693	63,264,119	163,227,204
1920	259,462,332	17,669,923	62,100,182	79,770,105	200,098,050
1921	255,474,332	12,857,830	60,885,266	73,743,096	172,137,325
1922	251,169,892	10,307,594	87,972,048	98,279,642	178,457,564

NOTE.—The statistics in this table are averages computed from monthly returns in each year.

[1] Six months, July to December 1900.

53.—Bank Reserves, with Liabilities, 1892-1922—concluded.

Years.	Securities.				Total Liabilities.	Net Liabilities.[1]
	Dominion and Provincial Government Securities.	Canadian municipal, British, Foreign and Colonial, other than Canadian.	Railway and other Bonds.	Total.		
	$	$	$	$	$	$
1892	3,173,714	7,709,634	7,060,065	17,943,413	208,062,169	200,590,342
1893	3,221,223	9,223,577	5,919,928	18,364,728	217,195,975	209,917,600
1894	3,152,962	10,634,982	7,893,695	21,681,639	221,006,724	214,163,371
1895	2,792,147	9,423,850	9,566,175	21,782,172	229,794,322	222,531,570
1896	2,802,821	9,310,414	11,505,439	23,618,674	232,338,086	225,090,083
1897	3,049,525	12,559,340	13,728,645	29,337,510	252,660,708	244,627,721
1898	4,898,081	16,529,414	17,241,967	38,669,462	281,076,656	271,451,376
1899	4,952,525	16,622,875	15,023,469	36,598,869	318,624,032	307,537,537
1900	8,163,571	14,364,547	19,561,005	42,089,123	356,394,095	344,672,898
1901	11,331,385	13,031,176	30,440,258	54,802,819	420,003,743	405,915,468
1902	9,804,998	14,487,633	34,859,390	59,152,021	466,963,829	451,052,607
1903	11,186,607	14,896,472	37,800,893	63,883,972	507,527,550	489,439,303
1904	10,705,202	15,560,146	38,779,477	65,044,825	554,014,076	534,147,781
1905	8,833,627	18,820,985	39,974,520	67,629,132	618,678,632	595,027,264
1906	9,360,614	20,460,625	41,125,898	70,947,137	713,790,553	684,185,650
1907	9,546,760	21,198,817	41,239,589	71,985,166	769,026,924	737,505,039
1908	9,522,743	19,788,937	42,651,006	71,962,686	762,077,184	726,443,676
1909	11,653,798	21,707,363	50,783,614	84,144,775	882,598,548	844,098,072
1910	14,741,621	21,696,987	56,194,734	92,633,342	1,019,177,601	974,731,187
1911	10,637,580	22,848,170	60,909,240	94,394,990	1,097,661,393	1,044,712,367
1912	9,388,968	22,586,119	64,080,763	96,055,850	1,240,124,354	1,178,577,787
1913	9,995,237	23,183,161	70,713,075	103,891,473	1,287,372,535	1,222,752,292
1914	11,697,603	22,707,738	68,636,267	103,041,608	1,309,944,006	1,251,372,615
1915	12,814,898	31,553,091	74,020,538	118,388,527	1,353,629,123	1,298,018,989
1916	29,717,007	117,902,686	68,386,482	216,006,175	1,596,905,337	1,520,438,686
1917	131,078,854	183,341,125	58,958,908	373,378,887	1,866,228,236	1,771,264,882
1918	162,821,026	252,936,568	56,103,418	471,861,012	2,184,359,820	2,071,307,749
1919	214,621,625	256,270,715	54,429,301	525,321,641	2,495,582,568	2,363,044,215
1920	120,356,255	210,826,991	48,031,228	379,214,474	2,784,068,698	2,608,151,193
1921	166,688,146	156,552,503	45,728,878	368,969,527	2,556,454,190	2,393,459,361
1922	198,826,031	90,131,491	43,208,733	332,166,255	2,364,822,657	2,219,372,799

NOTE.—The statistics in this table are averages computed from monthly returns in each year.

[1] Net liabilities are obtained by deducting from total liabilities the items "notes of other banks," "cheques on other banks," "loans to other banks in Canada, secured, including bills rediscounted," which represent indebtedness within the system and are counterbalanced by credits within the system.

54.—Ratio of Bank Reserves to Net Liabilities, 1892-1922.

Years.	Cash on hand.	Cash due from banks outside of Canada.	Call and short loans elsewhere than in Canada.	Securities.	Total Reserves.
	p.c.	p.c.	p.c.	p.c.	p.c.
1892	8·8	11·3	–	8·9	29·0
1893	9·4	9·5	–	8·7	27·6
1894	10·4	10·4	–	10·1	30·9
1895	10·4	12·6	–	9·8	32·8
1896	9·9	10·8	–	10·5	31·2
1897	10·3	13·6	–	11·9	35·8
1898	9·3	12·1	–	14·2	35·6
1899	8·7	11·7	–	11·8	32·2
1900	8·4	6·5	8·2	12·2	35·3
1901	8·0	4·5	10·0	13·5	36·0
1902	7·9	4·4	10·2	13·1	35·6
1903	8·9	4·0	7·7	13·0	33·6
1904	9·4	4·5	7·7	12·1	33·7

54.—Ratio of Bank Reserves to Net Liabilities, 1892-1922—concluded.

Years.	Cash on hand.	Cash due from banks outside of Canada.	Call and short loans elsewhere than in Canada.	Securities.	Total Reserves.
	p.c.	p.c.	p.c.	p.c.	p.c.
1905	9·5	4·9	8·6	11·3	34·3
1906	8·9	3·7	8·7	10·4	31·7
1907	9·5	2·9	7·2	9·7	29·3
1908	11·1	5·5	8·3	9·9	34·8
1909	11·3	5·0	14·2	9·9	40·4
1910	10·7	4·8	11·5	9·5	36·5
1911	11·5	4·8	8·7	9·0	34·0
1912	11·3	4·3	8·9	8·1	32·5
1913	11·1	3·4	8·1	8·5	31·1
1914	12·8	3·9	9·0	8·2	33·9
1915	15·4	5·0	9·2	9·1	38·7
1916	13·7	6·4	10·8	14·2	45·1
1917	11·9	4·0	8·9	21·1	45·9
1918	12·4	2·8	7·8	22·8	45·8
1919	10·9	2·7	6·9	22·2	42·7
1920	9·9	3·1	7·7	14·5	35·2
1921	10·7	3·1	7·2	15·4	36·4
1922	11·3	4·4	8·0	15·0	38·7

NOTE.—The statistics in this table are based upon the averages of the monthly returns in each year.

Chartered Banks in Canada.—During the period from 1881 to 1901, the number of chartered banks doing business in Canada under the Bank Act remained almost the same, 36 in 1881 and 1891 and 34 in 1901, but during the present century there has been in banking as in industry an era of amalgamations, the number of chartered banks being reduced to 25 in 1913 and to 16 in Nov. 1923. That this has been far from involving a curtailment of banking facilities is seen in Table **46**, which shows the development of the banking business since 1867, and in Table **55**, which compares the number of branch banks existing in Canada at different periods, showing a growth from 123 at Confederation to 4,451 at December 30, 1922, besides 200 branches in other countries. Table **56** gives the number of branches of the various banks by provinces as at December 30, 1922, while Table **57** contains the statistics of branches of Canadian banks doing business outside of Canada, an extension of Canadian banking (more especially to Newfoundland and the West Indies) which has proceeded very rapidly in recent years.[1]

55.—Number of Branches of Banks in Canada, by Provinces, 1868, 1902, 1905 and 1915-1922.

Provinces.	1868.	1902.	1905.	1915.	1916.[2]	1917.[2]	1918.[2]	1919.[2]	1920.[2]	1921.[2]	1922.[2]
Prince Edward Island	–	9	10	17	17	17	24	36	41	40	36
Nova Scotia	5	89	101	109	111	119	123	155	169	166	156
New Brunswick	4	35	49	79	82	83	84	111	121	122	127
Quebec	12	137	196	716	784	821	795	1,055	1,150	1,236	1,198
Ontario	100	349	549	1,164	1,154	1,169	1,165	1,451	1,586	1,574	1,521
Manitoba	–	52	95	204	200	203	254	322	349	329	304
Saskatchewan	–	30	87	401	413	441	506	581	591	549	524
Alberta	–	–	–	258	247	267	307	408	424	396	356
British Columbia	2	46	55	208	187	183	179	215	242	244	226
Yukon	–	–	3	3	3	3	3	3	3	3	3
Total	**123**	**747**	**1,145**	**3,159**	**3,198**	**3,306**	**3,440**	**4,337**	**4,676**	**4,659**	**4,451**

[1] The statistics of Tables **55**, **56** and **57** have been furnished by the Canadian Bankers' Association.
[2] Includes sub-agencies for receiving deposits for the banks employing them.

56.—Number and Location of Branches of Chartered Banks, as at December 30, 1922.

Chartered Banks.	P. E. Island.	Nova Scotia.	New Brunswick.	Quebec.	Ontario.	Manitoba.
Bank of Montreal	1	15	16	82	204	45
Bank of Nova Scotia	11	42	40	20	133	9
Bank of Toronto	–	–	–	10	84	12
Molsons Bank	–	–	–	47	72	2
La Banque Nationale	–	–	1	100	2	–
Banque Provinciale du Canada	3	–	14	82	14	–
Union Bank of Canada	1	2	3	10	90	65
Canadian Bank of Commerce	8	24	7	74	129	34
Royal Bank of Canada	8	68	25	59	191	37
Dominion Bank	–	–	1	5	85	12
Standard Bank of Canada	–	–	1	1	114	6
Bank of Hamilton	–	–	–	1	67	31
Banque d'Hochelaga	–	–	–	133	19	11
Imperial Bank of Canada	–	–	–	2	86	9
Home Bank of Canada	–	–	–	4	39	8
Sterling Bank of Canada	–	–	–	1	67	7
Weyburn Security Bank	–	–	–	–	–	–
Total	**32**	**151**	**108**	**631**	**1,396**	**288**
Sub-agencies (Provincial)	4	5	19	567	125	16
Grand Total	**36**	**156**	**127**	**1,198**	**1,521**	**304**

Chartered Banks.	Saskatchewan.	Alberta.	British Columbia.	Yukon.	Other Countries.	Provincial Sub-agencies.	Total.
Bank of Montreal	72	83	57	1	17	35	628
Bank of Nova Scotia	15	4	5	–	43[1]	26	348
Bank of Toronto	34	14	4	–	–	–	158
Molsons Bank	–	3	3	–	–	–	127
La Banque Nationale	–	–	–	–	1	242	346
Banque Provinciale du Canada	–	–	–	–	–	189	302
Union Bank of Canada	101	64	9	–	3	14	362
Canadian Bank of Commerce	78	62	56	2	17	22	513
Royal Bank of Canada	85	40	52	–	117[2]	17	699
Dominion Bank	6	6	4	–	2	2	123
Standard Bank of Canada	18	23	1	–	–	9	173
Bank of Hamilton	27	12	10	–	–	4	152
Banque d'Hochelaga	10	8	–	–	–	168	349
Imperial Bank of Canada	25	25	14	–	–	29	190
Home Bank of Canada	8	2	2	–	–	15	78
Sterling Bank of Canada	4	–	–	–	–	–	79
Weyburn Security Bank	22	–	–	–	–	2	24
Total	**505**	**346**	**217**	**3**	**200**	**774**	**4,651**
Sub-agencies (Provincial)	19	10	9	–	–	–	–
Grand Total	**524**	**356**	**226**	**3**	**200**	–	**4,651**

[1] Includes one sub-agency. [2] Includes one auxiliary company.

57.—Number of Branches of Canadian Chartered Banks in other countries, with their location, December 30, 1922.

Banks and Location.	Branches.	Banks and Location.	Branches.
	No.		No.
Bank of Montreal:—		Royal Bank of Canada:—	
Newfoundland	8	Newfoundland	7
Great Britain	2	Cuba	56
France	1	British West Indies	20
United States	4	Porto Rico	3
Mexico	2	Dominican Republic	6
		Haiti	3
		Martinique	1
		Guadeloupe	2
Bank of Nova Scotia:—		Argentina	2
Newfoundland	18	British Guiana	3
Jamaica	11[1]	British Honduras	1
Cuba	4	Brazil	3
Porto Rico	3	Colombia	1
Dominican Republic	3	Costa Rica	1
United States	3	Uruguay	1
England	1	Venezuela	3
		Spain	1
		United States	1
Banque Nationale:—		Great Britain	1
France	1		
Union Bank of Canada:—		Auxiliary:—	
England	2		
United States	1	Royal Bank of Canada, (France) Paris	1
Canadian Bank of Commerce:—			
Newfoundland	4	The Dominion Bank:—	
St. Pierre and Miquelon	1	Great Britain	1
Barbados	1	United States	1
Trinidad	2		
Jamaica	1		
Cuba	1		
Brazil	1	**Total**	**200**
Mexico	1		
Great Britain	1		
United States	4		

[1] Includes one sub-agency.

Clearing House Transactions.—The appended table shows for the years 1918 to 1922 the total volume of clearings in 16 of the larger cities of Canada. These figures, it may be added, represent not only actual city clearings but exchanges between numerous rural branches of the banks in each district.

58.—Amount of Exchanges of the Clearing Houses of Chartered Banks in 16 Leading Cities, for the calendar years 1918-1922.[1]

Cities.	1918.	1919.	1920.	1921.	1922.
	$	$	$	$	$
Calgary	331,334,577	355,011,325	438,073,277	335,465,202	263,237,000
Edmonton	171,015,066	233,066,784	294,873,361	260,288,619	234,211,000
Halifax	215,289,303	241,300,194	254,677,402	181,802,598	160,112,000
Hamilton	262,076,476	306,370,966	380,733,960	297,932,727	283,272,000
London	176,958,350	164,126,856	192,157,969	161,956,959	147,788,000
Montreal	4,833,924,284	6,251,781,893	7,109,189,038	5,720,258,173	5,093,943,000
Ottawa	357,598,751	472,691,921	515,006,231	404,237,694	370,775,000
Quebec	238,906,890	290,983,483	364,589,361	302,491,488	283,422,000
St. John	117,133,608	151,319,093	176,672,389	148,973,887	142,488,000
Toronto	3,379,864,506	4,251,644,303	5,410,214,802	5,105,893,768	4,974,950,000
Vancouver	545,368,714	654,913,205	846,540,136	708,205,932	682,964,000
Victoria	101,471,852	123,351,345	145,707,106	122,416,244	105,776,000
Winnipeg	2,362,734,211	2,316,724,063	3,015,703,999	2,682,441,103	2,563,939,000
Regina	184,624,629	210,898,989	231,070,268	203,659,640	184,949,000
Saskatoon	91,431,883	105,886,584	118,503,076	100,523,291	87,892,000
Moose Jaw	78,425,563	86,447,625	94,624,910	74,739,761	64,035,000
Total	**13,448,158,663**	**16,216,518,629**	**19,588,337,285**	**16,811,287,086**	**15,643,753,000**

[1] From Bradstreet's.

Bank Amalgamations and Insolvencies.—Two tables are appended which may be of interest to students of Canadian banking history. The first, showing bank insolvencies since 1867, gives the capital paid up, reserve, assets and liabilities of insolvent banks, and shows also the payments p.c. to noteholders and depositors. In the majority of cases, both these classes of creditors have received payment in full. The table of bank absorptions gives the dates of absorption of the 30 banks which were incorporated with other institutions between 1870 and 1923.

59.—Canadian Bank Insolvencies since 1867.

Names.	Date of Suspension.	Paid up Capital.	Reserve Fund.	Liabilities.	Assets.	Paid to Noteholders.	Paid to Depositors.
		$	$	$	$	p.c.	p.c.
Commercial Bank of N.B.	—— 1868	600,000	–	671,420	1,222,454	100	100
Bank of Acadia[2]	April, 1873	100,000	–	106,914	213,346	–	–
Metropolitan Bank	Oct., 1876	800,170	–	293,379	779,225	100	100
Mechanics' Bank	May, 1879	194,794	–	547,238	721,155	57½	57½
Bank of Liverpool	Oct., 1879	370,548	–	136,480	207,877	100	96⁶/₁₇
Consolidated Bank of Can.	Aug., 1879	2,080,920	–	1,794,249	3,077,202	100	100
Stadacona Bank	July, 1879	991,890	–	341,500	1,355,675	100	100
Bank of Prince Edward I'd.	Nov.28,1881	120,000	45,000	1,108,000	953,244	59½	59½
Exchange Bank of Canada	Sept., 1883	500,000	300,000	2,868,884	3,779,493	100	66⅔
Maritime Bank of Dom. of Canada	Mar., 1887	321,900	60,000	1,409,482	1,825,993	100	10⅔
Pictou Bank	Sept., 1887	200,000	–	74,364	277,017	100	100
Bank of London in Canada	Aug., 1887	241,101	50,000	1,031,280	1,310,675	100	100
Central Bank of Canada	Nov., 1887	500,000	45,000	2,631,378	3,231,518	100	99⅔
Federal Bank	Jan., 1888	1,250,000	150,000	3,449,499	4,869,113	100	100
Commercial Bank of Manitoba	June 30,1893	552,650	50,000	1,341,251	1,951,151	100	100
Banque du Peuple	July 15, 1895	1,200,000	600,000	7,761,209	9,533,537	100	75¼
Banque Ville Marie	July 25, 1899	479,620	10,000	1,766,841	2,267,516	100	17½
Bank of Yarmouth	Mar. 6, 1905	300,000	35,000	388,660	723,660	100	100
Ontario Bank	Oct. 13, 1906	1,500,000	700,000	15,272,271	15,920,307	100	100
Sovereign Bank of Canada	Jan. 18, 1908	3,000,000	–	16,174,408	19,218,746	100	100
Banque de St. Jean	April28,1908	316,386	10,000	560,781	326,118	100	30⅓
Banque de St. Hyacinthe	Jan. 24,1908	331,235	75,000	1,172,630	1,576,443	100	100
St. Stephen's Bank	Mar. 10, 1910	200,000	55,000	549,830	818,271	100	100
Farmers Bank	Dec. 19, 1910	567,579	–	1,997,041	2,616,683	100	[1]
Bank of Vancouver	Dec. 14, 1914	445,188	–	912,137	1,532,786	100	[1]
Home Bank of Canada	Aug. 17, 1923	1,960,591	550,000	24,889,049	27,434,709	100	[1]

[1] Liquidation incomplete.

[2] This bank was only in existence for 3 months and 26 days. Only some of its notes were redeemed on its re-opening for a few days. The Dominion Government received 25 cents on the dollar on several thousand dollars worth of the notes which it held.

60.—Bank Absorptions in Canada since 1867.[1]

Purchasing Bank.	Bank Absorbed.	Date.[2]
Bank of Montreal	Exchange Bank, Yarmouth, N.S.	Aug. 13, 1903.
	People's Bank of Halifax, N.S.	June 27, 1905.
	Ontario Bank	Oct. 13, 1906.
	People's Bank of New Brunswick	April 15, 1907.
	Bank of British North America	Oct. 12, 1918.
	Merchants Bank	Mar. 20, 1922.
Canadian Bank of Commerce	Gore Bank	May 19, 1870.
	Bank of British Columbia	Dec. 31, 1900.
	Halifax Banking Co.	May 30, 1903.
	Merchants Bank of P.E.I.	May 31, 1906.
	Eastern Townships Bank	Feb. 29, 1912.
	Bank of Hamilton	Dec. 31, 1923.
Bank of Nova Scotia	Union Bank of P.E.I.	Oct. 1, 1883.
	Bank of New Brunswick	Feb. 15, 1913.
	The Metropolitan Bank	Nov. 14, 1914.
	The Bank of Ottawa	April 30, 1919.
Royal Bank of Canada	Union Bank of Halifax	Nov. 1, 1910.
	Traders Bank of Canada	Sept. 3, 1912.
	Quebec Bank	Jan. 2, 1917.
	Northern Crown Bank	July 2, 1918.
Imperial Bank of Canada	Niagara District Bank	June 21, 1875.
Standard Bank of Canada	Western Bank of Canada	Feb. 13, 1909.

60.—Bank Absorptions in Canada since 1867[1]—concluded.

Purchasing Bank.	Bank Absorbed.	Date.[2]
Union Bank of Canada	United Empire Bank	Mar. 31, 1911.
Bank of New Brunswick	Summerside Bank	Sept. 12, 1901.
Merchants Bank of Canada	Merchants Bank	Feb. 22, 1868.
	Commercial Bank of Canada	June 1, 1868.
Union Bank of Halifax	Commercial Bank of Windsor	Oct. 31, 1902.
Northern Crown Bank	The Northern Bank	July 2, 1908.
	Crown Bank of Canada	July 2, 1908.
Home Bank of Canada	La Banque Internationale du Canada	April 15, 1913.

[1] The purchasing banks named in the latter part of the table are no longer in business.
[2] Dates given since 1900 are of the Orders in Council authorizing the absorption.

Government and Other Savings Banks.[1]—There are two classes of Dominion Government Savings Banks in Canada, the Post Office Savings Banks, under the Post Office Department, and the Dominion Government Savings Banks, attached to the Department of Finance. The former were established under the Post Office Act of 1867, (31 Vict., c. 10), in order "to enlarge the facilities now available for the deposit of small savings, to make the Post Office available for that purpose, and to give the direct security of the Dominion to every depositor for repayment of all money deposited by him, together with the interest due thereon." On Mar. 31, 1922, the number of offices authorized to transact business was 1,303, and the number of savings accounts was 82,196. Statistics of deposits are given in Table **62**. The Government Savings Banks proper, under the management of the Finance Department, are established in the leading cities of Canada under the management of the Assistant Receiver General, and in other places in the provinces of Nova Scotia and New Brunswick, under managers appointed by the Governor in Council. Statistics of their deposits are given in Table **63**, and for the two systems combined in Table **64**.

Other Savings Banks.—The Montreal City and District Savings Bank, founded in 1846, and now operating under a charter granted in 1871, had a paid-up capital on November 30, 1922, of $1,498,570, deposits of $45,788,640, and total liabilities of $46,158,516. Total assets amounted to $49,425,326, including over $31,000,000 of Dominion, provincial and municipal securities. The Caisse d'Economie de Notre Dame de Quebec, founded in 1848 under the auspices of the St. Vincent de Paul Society, incorporated by Act of the Canadian Legislature in 1855 and given a Dominion charter by 34 Victoria, c. 7, had on November 30, 1922, deposits of $11,123,189, a paid-up capital of $1,000,000 and an excess of assets over liabilities of $2,008,543.

The co-operative people's banks of Quebec (113 in number) are also an important element in promoting thrift and assisting business in that province. Loans granted in 1921 numbered 14,983, amounting to $4,248,725, a slight decrease from figures for 1920. Profits realized amounted to $352,940.

[1] The system of Government of Ontario Savings Offices, established as sub-Treasury Offices of the Province, conducts a purely savings bank business, paying 4 p.c. on deposits, all of which are repayable on demand. The system has been in operation for about two years, during which time total deposits have grown to $16,000,000 (Jan. 15, 1924), number of depositors to between 60,000 and 70,000, and the number of offices to 15, mostly in the western sections of the province. The province effects a saving by utilizing deposits for governmental purposes, rather than procuring funds by means of bond issues.

A similar system is in operation in Manitoba, where 4 or 5 sub-Treasury Offices of the province had deposits of about $9,000,000 on Nov. 30, 1923.

Historical statistics of Post Office savings banks, of Dominion Government savings banks, of the Montreal City and District savings bank and of the Caisse d'Economie de Notre Dame de Quebec are given in Table 61.

61.—Deposits with Government and other Savings Banks, as at June 30, 1868-1906, and March 31, 1907-1923.

Years.	Post Office Savings Banks.	Dominion Government Savings Banks.	Other Savings Banks (Montreal City and District and Caisse d'Economie de Notre Dame de Quebec).	Total.	Amount per head of Population.
	$	$	$	$	$ cts.
1868	204,589	1,483,219	3,369,799	5,057,607	1 50
1869	856,814	1,594,525	3,960,818	6,412 157	1 88
1870	1,588,849	1,822,570	5,369,103	8,780,522	2 54
1871	2,497,260	2,072,037	5,766,712	10,336,009	2 96
1872	3,096,500	2,154,233	5,557,126	10,807,859	2 99
1873	3,207,052	2,958,170	6,768,662	12,933,884	3 53
1874	3,204,965	4,005,296	6,811,009	14,021,270	3 67
1875	2,926,090	4,245,091	6,611,416	13,782,597	3 55
1876	2,740,952	4,303,166	6,519,229	13,563,347	3 43
1877	2,639,937	4,830,694	6,054,456	13,525,087	3 37
1878	2,754,484	5,742,529	5,631,172	14,128,185	3 46
1879	3,105,191	6,102,492	5,494,164	14,701,847	3 55
1880	3,945,669	7,107,287	6,681,025	17,733,981	4 21
1881	6,208,227	9,628,445	7,685,888	23,522,560	5 44
1882	9,473,661	12,295,001	8,658,435	30,427,096	6 94
1883	11,976,237	14,242,870	8,791,045	35,010,152	7 90
1884	13,245,553	15,971,983	8,851,142	38,068,679	8 49
1885	15,090,540	17,888,536	9,191,895	42,170,971	9 29
1886	17,159,372	20,014,442	9,177,132	46,350,946	10 10
1887	19,497,750	21,334,525	10,092,143	50,924,418	10 98
1888	20,689,033	20,682,025	10,475,292	51,846,350	11 06
1889	23,011,423	19,994,934	10,761,061	53,717,419	11 33
1890	21,990,653	19,021,812	10,908,987	51,921,452	10 83
1891	21,738,648	17,661,378	10,982,232	50,382,258	10 40
1892	22,298,402	17,231,146	12,236,100	51,765,648	10 59
1893	24,153,194	17,696,464	12,823,836	54,673,494	11 08
1894	25,257,868	17,778,144	12,919,578	55,955,599	11 23
1895	26,805,542	17,644,956	13,128,483	57,578,981	11 44
1896	28,932,930	17,866,389	14,459,833	61,259,152	12 04
1897	32,380,829	16,554,147	15,025,564	63,960,540	12 44
1898	34,480,938	15,630,181	15,482,100	65,593,219	12 62
1899	34,771,605	15,470,110	15,893,567	66,135,282	12 57
1900	37,507,456	15,642,267	17,425,472	70,575,195	13 26
1901	39,950,813	16,098,146	19,125,097	75,174,056	13 95
1902	42,320,209	16,117,779	20,360,888	78,798,876	14 44
1903	44,255,326	16,515,802	21,241,993	82,013,121	14 83
1904	45,419,706	16,738,744	23,063,143	85,221,593	15 21
1905	45,368,321	16,649,136	25,050,966	87,068,423	14 53
1906	45,736,488	16,174,134	27,399,194	89,309,816	14 47
1907	47,453,228	15,088,584	28,359,618	90,901,430	14 42
1908	47,564,284	15,016,871	28,927,248	91,508,403	14 10
1909	45,190,484	14,748,436	29,867,973	89,806,893	13 41
1910	43,586,357	14,677,872	32,239,620	90,503,849	13 08
1911	43,330,579	14,673,752	34,770,386	92,774,717	12 87
1912	43,563,764	14,655,564	39,526,755	97,746,083	13 27
1913	42,728,942	14,411,541	40,133,351	97,273,834	12 92
1914	41,591,286	13,976,162	39,110,439	94,677,887	12 31
1915	39,995,406	14,006,158	37,817,474	91,819,038	11 68
1916	40,008,418	13,519,855	40,405,037	93,933,310	11 69
1917	42,582,479	13,633,610	44,139,978	100,356,067	12 27
1918	41,283,479	12,177,283	42,000,543	95,461,305	11 46
1919	41,654,960	11,402,098	46,799,877	99,856,935	11 78
1920	31,605,594	10,729,218	53,118,053	95,452,865	11 06
1921	29,010,619	10,150,189	58,576,775	97,737,583	11 12
1922	24,837,181	9,829,653	58,292,920	92,959,754	10 37
1923	22,357,268	9,433,839	59,327,961	91,119,068	9 96

NOTE.—The statistics of this table do not include provincial government savings offices.

62.—Business of the Post Office Savings Banks, March 31, 1918-1923.

Items.	1918.	1919.	1920.	1921.	1922.	1923.
Savings banks.....No.	1,318	1,328	1,323	1,328	1,303	1,307
Deposits..... $	11,791,967	12,593,190	10,003,068	6,631,685	3,499,339	2,606,611
Transferred from Government S.B. to Post Office S.B..... $	91,649	174,143	184,303	589,247	56,468	-
Interest on deposits..... $	1,244,578	1,208,559	1,056,545	883,842	767,302	677,918
Total cash and interest. $	13,128,194	13,975,892	11,243,916	8,104,774	4,323,109	3,284,529
Withdrawals..... $	14,427,194	13,604,411	21,293,282	10,699,749	8,496,547	5,764,442
At credit of open accts.. $	41,283,479	41,654,960	31,605,594	29,010,619	24,837,181	22,357,268
Open accounts.....No.	125,735	116,541	97,154	88,563	82,196	76,111

63.—Business of the Dominion Government Savings Banks, March 31, 1918-1923.

Items.	1918.	1919.	1920.	1921.	1922.	1923.
	$	$	$	$	$	$
Deposits.....	2,048,469	2,344,918	2,378,600	2,103,873	1,400,906	1,223,171
Interest on deposits.....	382,151	340,378	319,800	294,349	289,210	278,640
Total cash and interest.....	2,430,620	2,685,296	2,698,400	2,398,222	1,690,116	1,501,811
Withdrawals.....	3,886,947	3,460,481	3,371,280	2,977,251	2,010,652	1,897,625
At credit of depositors.....	12,177,283	11,402,098	10,729,218	10,150,189	9,829,653	9,433,839

64.—Total Business of Post Office and Dominion Government Savings Banks, March 31, 1918-1923.

Items.	1918.	1919.	1920.	1921.	1922.	1923.
	$	$	$	$	$	$
Deposits.....	13,932,085	15,112,251	12,565,971	9,324,805	4,956,713	3,829,782
Interest on deposits.....	1,626,729	1,548,937	1,376,345	1,178,191	1,056,512	956,558
Total cash and interest.....	15,558,814	16,661,188	13,942,316	10,502,996	6,013,225	4,786,340
Withdrawals.....	18,314,141	17,064,892	24,664,562	13,677,000	10,507,199	7,662,067
At credit of depositors.....	53,460,762	53,057,058	42,334,812	39,160,808	34,666,834	31,791,107

3.—Loan and Trust Companies.

Loan and Trust Companies.—Up to and including the year 1913, tables were given in the Year Book of the assets and liabilities, with comparative figures for a series of years, of loan companies and building societies. These tables were taken from the "Annual Report of the Affairs of Building Societies, Loan and Trust Companies in the Dominion of Canada," as issued by the Department of Finance. The statistics in this report were compiled by the Department of Finance, partly from the statements required to be furnished under legislation of the Dominion Parliament and partly from returns voluntarily made by corporations operating under provincial charters. The laws relating to loan and trust companies incorporated by Acts of the Parliament of Canada were revised by the Loan and Trust Companies Acts of 1914 (4-5 Geo. V, cc. 40 and 55), and since the passing of these Acts the Annual Report issued by the Department of Finance up to and including the year 1913 has been replaced by "Annual Statements of the Loan and Trust Companies incorporated by Acts of the Parliament of Canada." Tables 65 and 66 show, therefore, the liabilities and assets of the loan and trust companies as compiled

from the statements furnished to the Department of Insurance. They relate to 16 loan and 14 trust companies, and do not include companies or societies operating under provincial charters. Under Chapters 14 and 21 of the Statutes of 1920 (10-11 Geo. V, chaps. 14 and 21) a systematic annual inspection of the affairs of these companies is made by the Department of Insurance.

65.—Liabilities and Assets of Loan Companies, 1914-1922.

LIABILITIES.

Years.	Capital paid up in cash.	Reserve Fund.	Debentures			Deposits payable on demand or after notice.	Other liabilities.	Total liabilities.
			payable in Canada.	payable elsewhere.	Stock issued.			
	$	$	$	$	$	$	$	$
1914	19,238,512	9,374,363	6,688,124	22,745,770	1,296,480	8,104,072	3,140,770	70,588,091
1915	19,401,856	9,878,266	6,764,836	22,279,861	1,390,869	8,193,194	3,083,784	71,992,666
1916	19,673,934	10,319,176	6,889,946	20,101,111	1,447,205	8,987,720	3,453,207	70,872,297
1917	19,813,217	10,705,215	7,075,081	18,270,163	1,509,491	8,934,825	3,371,201	69,679,193
1918	19,945,858	10,938,193	7,442,982	17,767,685	1,543,566	7,802,539	4,554,401	69,995,224
1919	20,191,612	11,923,234	7,765,614	17,894,509	1,595,780	9,347,096	5,802,176	74,520,021
1920	24,062,521	13,442,364	16,982,032	18,451,054	–	15,257,840	2,217,449	90,413,261
1921	25,750,966	14,278,619	17,682,083	20,265,766	–	15,868,926	1,434,762	95,281,122
1922	25,241,600	14,586,439	20,360,480	22,390,990	–	16,910,558	913,585	100,403,652

ASSETS.

Years.	Lent on mortgages and hypotheques.	Loans upon and invested in bonds, stocks, and other securities.	Cash on hand and in banks.	Interest due.	Other Assets.	Total Assets.
	$	$	$	$	$	$
1914	53,710,084	10,666,594	3,220,803	591,443	2,399,167	70,588,091
1915	52,807,357	10,880,850	3,993,004	679,966	2,631,489	71,992,666
1916	51,981,926	11,799,224	3,241,053	681,246	3,168,848	70,872,297
1917	49,722,872	12,124,736	3,478,220	751,475	3,608,920	69,676,223
1918	48,293,988	14,188,297	3,023,839	524,664	3,964,253	69,995,031
1919	47,309,298	19,420,695	2,838,636	261,810	4,689,582	74,520,021
1920	63,725,084	18,344,060	3,363,877	1,658	4,978,582	90,413,261
1921	67,320,461	16,842,515	4,568,953	2,722,260	5,244,620	96,698,809
1922	71,741,961	16,956,124	4,800,649	2,989,460	6,004,951	102,493,145

66.—Liabilities and Assets of Trust Companies, 1914-1922.

LIABILITIES.

Years.	Liabilities to Shareholders.			Other liabilities.	Total liabilities in company funds to shareholders.	Liabilities to the Public.		Total liabilities to the public.
	Capital paid up in cash.	Reserve Fund.	Other liabilities to shareholders.			Guaranteed funds.	Estate trusts and agencies under administration.	
	$	$	$	$	$	$	$	$
1914	6,051,146	2,541,413	202,427	1,948,414	10,743,400	8,560,468	29,832,343	38,392,811
1915	5,307,128	1,159,479	233,738	606,005	7,306,350	9,727,099	31,002,934	40,730,033
1916	5,673,670	1,245,589	287,214	620,470	7,826,943	10,405,318	36,756,902	47,162,220
1917	5,297,130	1,275,789	352,153	731,220	7,656,292	11,149,958	38,141,389	49,291,347
1918	6,266,203	1,477,617	415,938	676,379	8,836,137	12,743,379	56,194,857	68,938,236
1919	7,356,474	1,643,464	391,625	616,378	10,007,941	12,704,672	52,084,047	64,788,719
1920	7,465,376	1,908,753	391,975	561,265	10,327,369	9,475,041	57,225,303	66,700,344
1921	7,532,777	1,746,579	167,303	499,264	9,945,923	8,559,326	79,252,639	87,811,965
1922	7,678,401	1,920,836	179,599	331,264	10,110,100	8,600,588	92,449,298	101,049,886

66.—Liabilities and Assets of Trust Companies, 1914-1922—concluded.

ASSETS—COMPANY FUNDS.

Years.	Loans			Real estate.	Government, municipal and school securities, owned.	Stocks.	Cash on hand and in banks.	Market value of real estate, government securities, etc., over book value.	All other assets belonging to the companies.	Total assets of the companies.
	on real estate, first liens.	on real estate, second liens.	on stocks and securities.							
	$	$	$	$	$	$	$	$	$	$
1914...	5,189,797	113,095	557,625	–	787,400	–	179,928	879,039	3,033,756	10,740,640
1915....	3,972,520	102,395	647,524	–	876,760	–	172,448	5,181	1,529,522	7,306,350
1916....	3,906,986	544,747	374,392	–	1,116,110	–	266,964	32,231	1,585,513	7,826,943
1917....	3,993,484	297,387	253,781	–	1,145,815	–	173,130	3,331	1,789,364	7,656,292
1918....	3,933,962	101,784	294,472	–	1,839,000	–	724,689	5,865	1,936,365	8,836,137
1919....	4,432,455	557,171	496,769	–	2,170,618	–	706,763	8,392	1,635,773	10,007,941
1920....	4,736,064	–	512,800	701,564	2,500,942	349,294	576,125	–	847,463	10,224,252
1921....	4,408,914	–	344,302	908,618	2,400,914	253,779	603,618	−253,598	1,317,785	10,237,930
1922....	5,659,486	–	391,475	567,970	1,584,234	264,186	473,687	−168,159	1,412,205	10,353,243

ASSETS—TRUST FUNDS.

Years.	Guaranteed Funds.						Estates, Trusts and Agency Funds.[1]
	First mortgages, and hypotheques upon improved freehold property.	Bonds and Debentures.	Stocks.	Cash on hand and in banks.	Other assets.	Total Guaranteed Funds.	
	$	$	$	$	$	$	$
1914.....	13,238,642	2,420,545	–	870,994	13,184,047	29,734,228	–
1915.....	12,267,515	4,214,787	–	778,473	11,706,041	28,966,816	–
1916.....	9,273,771	4,841,833	–	2,661,481	13,400,107	30,177,192	–
1917.....	9,251,407	6,707,457	–	1,351,416	14,247,227	31,557,507	–
1918.....	9,314,279	9,833,060	–	2,027,618	15,428,747	36,603,704	–
1919.....	10,950,249	11,393,564	–	2,694,454	19,256,564	44,294,831	–
1920.....	4,247,183	2,437,106	329,801	843,832	941,588	8,809,510	64,895,196
1921.....	4,169,039	2,508,197	–	550,010	1,556,622	8,783,868	79,252,639
1922.....	5,241,872	1,885,982	–	546,929	954,124	8,628,907	92,449,298

[1] For the years 1914 to 1919 the figures for this column are not distinguished in the official returns from the figures for guaranteed funds shown in the preceding columns.

III.—INSURANCE.

Insurance companies transacting business throughout the Dominion of Canada are licensed by the Dominion Government under Acts administered by the Department of Insurance, under the Minister of Finance, while other insurance companies, doing business only in one province, or, by arrangement, in more provinces than one, are licensed by Provincial Governments. The statistics here published are in the main those of companies doing business under license from the Dominion Government and are divided into three classes relating to (1) insurance against fire, (2) life insurance, and (3) insurance of a miscellaneous character, covering risks of accident, guarantee, employers' liability, sickness, burglary, hail, steam boilers, tornado, weather, inland transportation, automobiles, sprinkler leakage, live stock and title. These statistics refer in all cases to the calendar year and are compiled from the report of the Insurance Department.

Since 1915 the Department of Insurance has endeavoured to collect from the available sources statistics of the business transacted by companies holding licenses from the Provincial Governments of Canada, or permitted by the laws of the provinces to transact business without a license. The business of the provincial licensees is divisible into three classes (1) business transacted by provincially incorporated companies within the province by which they are incorporated, (2) business transacted by provincially incorporated companies in provinces other than those by which they are incorporated, and (3) business transacted by British and foreign companies licensed by the Provincial Governments. Further, under section 129 of the Insurance Act of 1917 (7-8 Geo. V, c. 29), fire insurance on property in Canada may be effected, under specified conditions, with companies or associations outside of Canada which are not licensed to transact insurance business in Canada.

1.—Fire Insurance.

Fire insurance in Canada began with the establishment by British fire insurance companies of agencies, usually situated in the sea ports and operated by local merchants. The oldest existing agency of a British company is that of the Phoenix Fire Office of London, now the Phoenix Assurance Co., Ltd., which first commenced business in Montreal in 1804. On account of the growth of the insurance business of these early British companies, branch offices were established and local managers were appointed, charged with directing the companies' affairs in Canada.

The Halifax Fire Insurance Co. is the first purely Canadian company of which any record is obtainable. Founded in 1809 as the Nova Scotia Fire Association, it was chartered in 1819 and operated in the province of Nova Scotia until 1919, when it was granted a Dominion license. Among the other pioneer fire insurance companies still in operation, mention may be made of the following: the Quebec Fire Assurance Co., which commenced business in 1818 and which was largely confined in ownership and operations to Quebec province; the British America Assurance Co., incorporated in 1833, the oldest company in Ontario; the Western Assurance Co., organized in 1851 and after a rapid and steady growth one of the largest companies of its kind on the continent; the two American companies, the Ætna Insurance Co., of Hartford, Conn., and the Hartford Fire Insurance Co., which commenced business in Canada in 1821 and 1836 respectively.

A company desirous of carrying on business throughout Canada must obtain a license from the Dominion Government. If it proposes restricting its operations to one particular province, a license may be had from that province, and it may transact its business within such limits without regard to any general laws of the Dominion relating to insurance. In 1875 an Insurance Department was created as a branch of the Finance Department at Ottawa, under the supervision of an officer known as the "Superintendent of Insurance", whose duties are to see that the laws enacted from time to time by the Canadian Parliament are duly observed by the companies. Some important requirements under these laws are: (1) a deposit of $50,000 of approved securities with the Government; (2) the appointment of a chief agent with power of attorney from the company; (3) the filing of a statement showing the financial position of the company at the time of its application for a license, and subsequent annual statements of its business. In addition, books of record must be kept at its chief office and be open to the inspection of government officers whose practice is to examine them annually.

The report of the Superintendent of Insurance for the year ended December 31, 1922, shows that at that date there were 172 fire insurance companies doing business in Canada under Dominion licenses, of which 46 were Canadian, 50 were British and 76 were foreign companies, whereas in 1875, the first year for which authentic records were collected by the Insurance Department, 27 companies operated in Canada, 11 Canadian, 13 British and 3 American. The proportionate increase in the number of British and foreign companies from 59 to 73 p.c. of the total number is a very marked point of difference between the fire and life insurance businesses in Canada, the latter being carried on very largely by Canadian companies.

The growth of business, as shown by the amount of insurance in force and premiums received yearly, has been a fairly steady one, the year 1922 showing a return to the conditions existing before 1921. A decline in the rate of losses paid to premiums received may be noticed in most years, the figures indicating that the companies suffered particularly heavy losses in 1877 and 1904, owing to the great fires in St. John and Toronto respectively.

Although in its early days the Dominion did not prove a very lucrative field for fire insurance companies, of late the great advance in building construction and the wide use of improved fire appliances and safety devices reduce materially the danger of serious conflagrations and place the risks assumed by companies in Canada on an equality with those of other countries.

A feature of the fire insurance business during late years, besides the unusual increase in premiums received, is the continued increase in the number of companies which are operating on the mutual or reciprocal plan. These companies, in which all profits or losses are directly received or paid by the policy holders, are making themselves felt as competitive factors in the fire insurance business.

Statistics of Fire Insurance.—Statistical tables of fire insurance in Canada are added, illustrative of the progress of total business since 1869 and of the operations of individual companies for the years 1921 and 1922. The gross amount of fire insurance policies, new and renewed, taken during the year 1922 was $6,859,106,314, as compared with $6,604,076,965 in the preceding year. The net cash received for premiums was $53,019,456, while net cash paid for losses was $36,429,287, or 68·69 p.c. of the premiums. The net amount in force with companies holding Dominion licenses on Dec. 31, 1922, was $6,375,555,569, while the net amount in force with provincial companies on the same date was $1,036,200,959. In addition, policies amounting to $451,617,986 were effected by companies, associations or underwriters not licensed to transact business in Canada.

Table 67 shows figures of the growth since 1869 of companies holding Dominion licenses, and Tables 68 and 69 illustrate the business done in Canada by individual companies during the years 1921 and 1922, while in Tables 70, 71 and 72 are given figures of the assets, liabilities and income and expenditure of companies of various nationalities during the years 1918-1922. A close study of the various items included in these tables will afford an excellent idea of the nature of business transacted by these various groups. A further summary of business by provinces is given in Table 73 for the years 1921 and 1922, with premiums and losses shown by nationality of companies. Further, a general summary of the business transacted by both Dominion and provincial licensees, is given, in Table 74, with business by unlicensed companies added in Table 75.

67.—Fire Insurance in Force, Premiums received, Losses paid and Percentage of Losses to Premiums, 1869-1922.

Years.	Amount in force at end of year.	Premiums received.	Losses paid.	Percentage of losses to premiums.	Years.	Amount in force at end of year.	Premiums received.	Losses paid.	Percentage of losses to premiums.
	$	$	$	p.c.		$	$	$	p.c.
1869....	188,359,809	1,785,539	1,027,720	57·56	1895...	837,872,864	6,943,382	4,993,750	71·92
1870....	191,549,586	1,916,779	1,624,837	84·77	1896...	845,574,352	7,075,850	4,173,501	58·98
1871....	228,453,784	2,321,716	1,549,199	66·73	1897...	868,522,217	7,157,661	4,701,833	65·69
1872....	251,722,940	2,628,710	1,909,975	72·66	1898...	895,394,107	7,350,131	4,784,487	65·09
1873....	278,754,835	2,968,416	1,682,184	55·67	1899...	936,869,668	7,910,492	5,182,038	65·51
1874....	306,844,219	3,522,303	1,926,159	54·68	1900...	992,332,360	8,331,948	7,774,293	93·31
1875....	364,421,029	3,594,764	2,563,531	71·31	1901...	1,038,687,619	9,650,348	6,774,956	70·20
1876....	404,608,180	3,708,006	2,867,295	77·33	1902...	1,075,263,168	10,577,084	4,152,289	39·26
1877....	420,342,681	3,764,005	8,490,919	225·58	1903...	1,140,453,716	11,384,762	5,870,716	51·57
1878....	409,899,701	3,368,430	1,822,674	54·11	1904...	1,215,013,931	13,169,882	14,099,534	107·06
1879....	407,357,985	3,227,488	2,145,198	66·47	1905...	1,318,146,495	14,285,671	6,000,519	42·00
1880....	411,563,271	3,479,577	1,666,578	47·90	1906...	1,443,902,244	14,687,963	6,584,291	44·83
1881....	462,210,968	3,827,116	3,169,824	82·83	1907...	1,614,703,536	16,114,475	8,445,041	52·41
1882....	526,856,478	4,229,706	2,664,986	63·01	1908...	1,700,708,263	17,027,275	10,279,455	60·37
1883....	572,264,041	4,624,741	2,920,228	63·14	1909...	1,863,276,504	17,049,464	8,646,826	50·72
1884....	605,507,785	4,980,128	3,245,323	65·16	1910...	2,034,276,740	18,725,531	10,292,393	54·96
1885....	611,794,479	4,852,460	2,679,287	55·22	1911...	2,279,868,346	20,575,255	10,936,948	53·16
1886....	586,773,022	4,932,335	3,301,388	66·93	1912...	2,684,355,895	23,194,518	12,119,581	52·25
1887....	634,767,337	5,244,502	3,403,514	64·90	1913...	3,151,930,389	25,745,947	14,003,759	54·39
1888....	650,735,059	5,437,263	3,073,822	56·53	1914...	3,456,019,009	27,499,158	15,347,284	55·81
1889....	684,538,378	5,588,016	2,876,211	51·47	1915...	3,531,620,802	26,474,833	14,161,949	53·49
1890....	720,679,621	5,836,071	3,266,567	55·97	1916...	3,720,058,236	27,783,852	15,114,063	54·40
1891....	759,602,191	6,168,716	3,905,697	63·31	1917...	3,986,197,514	31,246,530	16,379,101	52·42
1892....	821,410,072	6,512,327	4,377,270	67·22	1918...	4,523,514,841	35,954,405	19,359,252	53·84
1893....	814,687,057	6,793,595	5,052,690	74·37	1919...	4,923,024,381	40,031,474	16,679,355	41·67
1894...	836,067,202	6,711,369	4,589,363	68·38	1920...	5,969,872,278	50,527,937	21,935,387	43·41
					1921...	6,020,513,832	47,312,564	27,572,560	58·28
					1922...	6,375,555,569	48,128,829	32,848,280	68·25
					Total.	–	**703,941,299**	**407,015,881**	**57·82**

68.—Fire Insurance Business transacted in Canada, 1921.

Companies.	Gross amount of risks taken during year.	Premiums charged thereon.	Rate of premiums per cent of risks.	Net cash received for premiums.	Net cash paid for losses.	Per centage of losses paid to premiums received.
	$	$	p.c.	$	$	p.c.
Canadian Companies—						
Acadia Fire	35,301,314	496,300	1·41	229,319	142,185	62·00
Antigonish Farmers	111,750	1,321	1·18	1,322	43	3·25
Beaver Fire	9,632,113	127,043	1·32	35,868	9,216	25·69
British America	117,946,281	1,324,278	1·12	645,963	381,526	59·06
British Colonial	28,940,466	445,570	1·54	201,645	142,245	70·54
British Northwestern	30,335,789	329,328	1·09	177,769	76,211	42·87
Canada Accident and Fire	24,820,227	285,718	1·15	127,494	46,151	36·20
Canada National	28,980,702	397,660	1·37	219,101	94,941	43·33
Canada Security	17,813,049	255,947	1·44	98,842	58,212	58·89
Canadian Fire	52,014,027	741,026	1·42	376,894	148,171	39·31
Canadian Indemnity	12,441,648	194,917	1·57	119,294	58,489	49·03
Canadian Lumbermen's	1,607,054	39,235	2·44	727	–	–
Canadian Surety	–	–	–	–	–	–
Cumberland Farmers	195,550	3,927	2·01	1,894	2,269	119·80
Dominion Fire	60,206,715	760,432	1·26	439,824	289,077	65·72
Dominion of Canada Guarantee and Accident	13,133,798	133,275	1·01	77,045	23,109	29·99
Fire Insurance Co. of Canada	44,584,410	458,916	1·03	199,503	102,936	51·60

68.—Fire Insurance Business transacted in Canada, 1921—con.

Companies.	Gross amount of risks taken during year.	Premiums charged thereon.	Rate of premiums per cent of risks.	Net cash received for premiums.	Net cash paid for losses.	Percentage of losses paid to premiums received.
	$	$	p.c.	$	$	p.c.
Canadian Companies—concluded.						
General Accident of Canada	10,253,004	110,881	1·08	48,616	21,627	44·46
Globe Indemnity	37,987,137	389,858	1·03	164,128	59,242	36·10
Grain Insurance	23,819,123	232,151	0·97	232,151	117,291	50·52
Guardian Insurance Co. of Canada	19,989,106	233,373	1·17	60,336	35,617	59·03
Halifax Fire	2,906,522	50,653	1·74	30,323	13,324	43·94
Hudson Bay	27,469,056	358,041	1·30	185,419	127,208	68·61
Imperial Guarantee and Accident	–	–	–	–	–	–
Imperial Underwriters	38,930,558	388,916	1·00	153,739	62,281	40·51
Kings Mutual	1,772,114	22,909	1·29	22,116	12,261	55·44
Liverpool Manitoba	44,226,593	533,017	1·21	270,240	107,053	39·61
London and Lancashire Guarantee and Accident	–	–	–	–	–	–
London Mutual	109,823,224	1,121,458	1·02	352,337	413,580	117·38
Mercantile	34,087,370	335,867	0·99	282,844	120,725	42·68
Mount Royal	98,631,772	1,241,075	1·26	655,066	379,139	57·88
Mutual Fire	1,014,170	20,599	2·03	19,762	8,920	45·14
North American Accident	–	–	–	–	–	–
North Empire	31,058,607	426,143	1·37	175,737	121,565	69·17
North West	23,656,087	284,329	1·20	159,592	79,710	49·95
Occidental	34,767,254	499,492	1·44	238,093	149,973	62·99
Pacific Coast	18,837,701	334,257	1·77	169,008	66,019	39·06
Pacific Marine	2,563,418	46,741	1·82	27,720	30,250	109·13
Pictou County Farmers	519,375	4,584	0·88	4,547	387	8·51
Quebec	40,567,724	425,468	1·05	355,872	121,763	34·22
Reliance	2,162,893	28,266	1·31	11,706	1,258	10·74
Scottish Canadian	10,217,170	162,997	1·60	65,745	27,853	42·37
Western	154,705,937	1,705,382	1·10	737,191	448,378	60·82
Totals	**1,248,030,808**	**14,951,350**	**1·20**	**7,374,792**	**4,100,205**	**55·60**
British Companies—						
Alliance	39,109,827	421,295	1·08	371,440	195,366	52·60
Atlas	81,033,933	943,680	1·16	733,557	367,531	50·10
Autocar	2,360,030	25,413	1·08	21,948	1,356	6·18
British Crown	58,783,701	714,238	1·22	494,327	363,174	73·47
British General	21,384,626	181,901	0·85	114,081	48,267	42·31
British Oak	2,191,805	24,147	1·12	21,513	9	–
British Traders	25,809,997	321,978	1·25	252,073	158,145	62·74
Caledonian	58,953,856	659,616	1·12	464,464	248,722	53·55
Car and General	54,502,563	252,389	0·46	162,710	44,923	27·61
Caxton	5,467,897	62,102	1·14	15,378	30,519	198·46
Century	40,558,340	427,321	1·05	284,782	141,355	49·64
China	899,812	13,572	1·51	7,986	2,721	34·07
Commercial Union	131,465,322	1,272,107	0·97	987,676	631,058	63·89
Eagle, Star and British Dominions	64,045,950	591,638	0·92	408,691	250,896	61·39
Employers' Liability	89,036,613	924,330	1·04	729,124	369,382	50·66
Essex and Suffolk	19,932,474	214,271	1·07	80,986	28,484	35·17
General Accident Fire	47,487,712	492,240	1·04	393,794	261,397	66·38
Guardian Assurance	160,790,095	1,891,261	1·18	1,585,749	877,686	55·35
Law, Union and Rock	38,114,061	405,107	1·06	324,029	144,615	44·66
Liverpool and London and Globe	154,720,682	1,767,569	1·14	1,483,062	746,720	50·31
London Guarantee	71,224,219	899,825	1·26	620,063	610,332	98·43
London and Lancashire	127,906,094	1,282,753	1·00	1,063,548	459,239	43·18
London Assurance	60,240,674	656,960	1·09	559,682	293,324	52·41
Marine	–	–	–	–	–	–
Merchants Marine	18,760,361	183,999	0·98	149,511	29,069	19·44
Motor Union	13,091,232	122,190	0·93	100,666	18,945	18·82
National Benefit	12,651,100	152,282	1·20	113,316	86,562	76·39
National Prov. Insurance	12,779,232	89,384	0·70	66,360	19,190	28·92
North British and Mercantile	126,057,090	1,393,466	1·11	1,118,723	625,497	55·91
Northern Assurance	108,322,596	1,281,303	1·18	1,066,707	636,137	59·64
Norwich Union Fire	106,143,811	1,341,359	1·26	1,097,237	543,159	49·50
Ocean, Accident and Guarantee	33,477,055	384,261	1·15	288,226	216,616	75·16
Palatine	44,925,331	514,098	1·14	407,726	205,363	50·37
Patriotic	2,792,512	14,071	0·50	13,259	94	0·71
Phœnix of London	137,947,436	1,715,758	1·24	1,225,353	652,093	53·22

68.—Fire Insurance Business transacted in Canada, 1921—con.

Companies.	Gross amount of risks taken during year.	Premiums charged thereon.	Rate of premiums per cent of risks.	Net cash received for premiums.	Net cash paid for losses.	Per centage of losses paid to premiums received.
	$	$	p.c.	$	$	p.c.
British Companies—concluded.						
Provincial	20,359,452	214,134	1·05	183,829	90,060	49·29
Queensland	30,477,613	326,333	1·07	275,862	152,430	55·26
Railway Passengers	–	–	–	–	–	–
Royal Exchange	83,356,091	846,306	1·02	634,612	268,728	42·35
Royal Insurance	219,915,642	2,381,598	1·08	1,895,573	1,175,870	62·03
Royal Scottish	23,349,904	259,589	1·11	201,236	106,805	53·07
Scottish Metropolitan	16,332,628	187,757	1·15	152,000	50,565	33·27
Scottish Union	48,609,955	488,845	1·01	414,758	186,930	45·07
Sun Insurance	91,727,380	1,066,104	1·16	871,446	428,233	49·14
Traders and General	21,659,844	262,845	1·21	183,111	126,735	69·21
Union Assurance	83,916,482	918,179	1·09	690,984	408,128	59·06
Union of Canton	61,853,192	695,159	1·12	537,632	421,179	78·34
United British	–	–	–	–	–	–
Union Marine	6,350	43	0·68	43	–	–
Yangtsze	9,874,736	59,115	0·60	45,738	26,223	57·33
Yorkshire	49,774,085	634,478	1·27	497,745	421,583	84·70
Totals	**2,734,181,393**	**29,978,369**	**1·09**	**23,412,314**	**13,171,415**	**56·26**
Foreign Companies—						
Ætna	66,301,227	648,338	0·98	493,925	261,584	52·96
Agricultural	7,308,886	90,745	1·24	63,552	25,279	39·78
Alliance Insurance	31,342,965	261,939	0·84	161,588	110,363	68·30
American Alliance	1,702,747	25,817	1·52	5,504	1,110	20·02
American Central	37,339,519	313,954	0·84	227,566	127,963	56·23
American Equitable	12,396,149	143,670	1·16	111,018	80,609	72·61
American Insurance	8,459,674	98,547	1·16	64,558	32,460	50·28
American Lloyds	4,200,138	17,175	0·41	12,934	3,885	30·04
Boston	13,393,941	163,081	1·22	99,378	62,635	63·03
Caledonian-American	11,165,859	127,363	1·14	64,990	16,830	25·90
California	13,100,157	134,738	1·03	107,739	46,707	43·35
Citizens of Missouri	3,047,045	47,204	1·55	36,385	17,169	47·19
Columbia	18,461,130	223,371	1·21	127,469	92,646	72·68
Commercial Union of N.Y.	1,092,946	17,060	1·56	7,354	2,492	33·89
Connecticut	26,569,801	296,393	1·12	188,809	85,818	45·45
Continental	69,317,638	679,816	0·98	496,665	353,676	71·21
Equitable Fire and Marine	23,381,864	244,508	1·05	49,387	30,245	61·24
Fidelity-Phenix	61,363,817	612,487	1·00	466,780	300,272	64·33
Fire Association of Philadelphia	7,473,619	91,849	1·23	67,524	42,000	62·20
Fireman's Fund	25,958,046	271,311	1·05	219,511	142,972	65·13
Firemen's Insurance	9,320,868	120,897	1·27	97,131	68,448	70·47
General of Paris	21,866,662	209,524	0·96	140,727	96,662	68·69
Girard	3,453,566	33,482	0·97	22,071	21,638	98·04
Glens Falls	29,636,440	333,238	1·12	203,688	170,640	83·78
Globe and Rutgers	119,800,534	1,166,353	0·97	830,060	623,037	75·06
Great American	80,203,276	750,462	0·85	506,388	340,414	67·22
Hardware Dealers	1,926,416	52,235	2·71	42,780	12,926	30·22
Hartford Fire	211,939,594	2,144,505	1·01	1,539,646	738,826	47·99
Home Insurance	175,760,150	2,199,442	1·25	1,711,785	1,253,274	73·21
Individual Underwriters	16,085,290	65,994	0·41	65,994	11,571	17·53
Insurance Co. of North America	135,151,876	1,233,867	0·91	806,671	490,628	60·82
Insurance Co. of State of Pennsylvania	20,468,089	192,863	0·94	147,252	117,209	79·60
Lumbermen's Underwriting Alliance	19,846,690	349,300	1·76	271,300	233,844	86·19
Manufacturing Lumbermen's	14,595,662	271,268	1·86	210,603	206,097	97·86
Manufacturing Woodworkers	6,713,567	125,378	1·87	76,894	114,578	149·01
Mechanics and Traders	1,244,927	34,375	2·76	22,545	19,602	86·94
Merchants Fire	11,691,587	127,131	1·09	102,087	29,598	28·99
Millers National	3,978,060	53,416	1·34	37,567	24,516	65·26
Minnesota Implement	1,926,416	52,235	2·71	42,780	12,926	30·22
National-Ben Franklin	15,747,331	192,624	1·22	157,432	69,282	44·01
National Fire of Hartford	69,225,739	891,128	1·29	682,243	658,214	96·48
National Liberty	2,864,545	33,818	1·23	29,777	17,871	60·02
National Union	28,516,239	352,552	1·24	263,657	199,995	75·85
La Nationale	56,486,781	675,443	1·20	587,793	340,472	57·92
Newark	16,751,519	207,033	1·24	110,590	66,174	59·84
New Hampshire	10,417,935	117,230	1·13	71,482	60,899	85·19

68.—Fire Insurance Business transacted in Canada, 1921—concluded.

Companies.	Gross amount of risks taken during year.	Premiums charged thereon.	Rate of premiums per cent of risks.	Net cash received for premiums.	Net cash paid for losses.	Percentage of losses paid to premiums received.
	$	$	p.c.	$	$	p.c.
Foreign Companies—concluded.						
New Jersey	7,990,731	90,876	1·14	64,497	23,458	36·37
New York Reciprocal Underwriters	24,673,462	90,445	0·37	69,063	5,855	8·48
Niagara	54,096,830	557,052	1·03	313,060	187,381	59·85
Northwestern Mutual	20,826,610	458,045	2·20	412,937	137,172	33·22
Northwestern National	25,722,395	318,301	1·24	281,326	99,279	35·29
Pacific	3,747,058	33,777	0·90	30,667	6,644	21·67
Phenix of Paris	26,629,466	271,559	1·02	176,455	112,116	63·54
Phœnix of Hartford	65,877,527	740,560	1·12	424,633	245,343	57·78
Providence Washington	33,519,358	313,466	0·94	229,186	110,704	48·30
Queen of America	81,786,801	942,015	1·15	751,791	427,633	56·88
Retail Hardware	1,926,416	52,235	2·71	42,780	12,926	30·22
St. Paul Fire and Marine	52,803,341	538,930	1·02	380,808	147,297	38·68
Security	747,653	4,464	0·60	3,616	19	54
Springfield Fire and Marine	77,185,594	662,744	0·86	381,389	289,090	75·80
Sterling	6,647,099	56,954	0·86	48,894	14,129	28·90
Stuyvesant	11,179,698	136,552	1·22	104,978	43,882	41·80
Tokio	11,519,598	111,296	0·97	88,067	18,851	21·41
L'Union of Paris	31,575,441	373,885	1·18	293,477	214,986	73·25
United States Fire	26,050,786	207,773	0·80	133,539	99,728	74·68
L'Urbaine	13,341,900	179,275	1·34	76,093	23,525	30·92
Vulcan	16,542,467	191,933	1·16	114,128	73,752	64·62
Westchester	33,875,234	404,771	1·19	250,495	171,105	68·31
Total	**2,157,262,392**	**23,232,067**	**1·08**	**16,535,458**	**10,300,938**	**62·33**
Grand Totals	**6,139,474,593**	**68,161,786**	**1·11**	**47,312,564**	**27,572,588**	**58·30**

69.—Fire Insurance Business transacted in Canada, 1922.[1]

Companies.	Gross amount of risks taken during year.	Premiums charged thereon.	Rate of premiums per cent of risks.	Net cash received for premiums.	Net cash paid for losses.	Percentage of losses paid to premiums received.
	$	$	p.c.	$	$	p.c.
Canadian Companies—						
Acadia	39,331,803	505,910	1·29	235,663	183,609	77·91
Antigonish Farmers	267,768	2,907	1·09	2,907	2,733	93·99
Beaver Fire	9,555,148	130,584	1·37	34,684	10,117	29·17
British America	130,655,133	1,148,672	0·88	611,837	441,079	72·09
British Colonial	33,642,773	388,753	1·16	29,692	195,122	657·14
British Northwestern	26,156,153	293,746	1·12	169,959	98,758	58·11
Canada Accident and Fire	29,983,610	314,081	1·05	138,119	73,785	53·42
Canada National	27,474,986	361,929	1·32	193,228	95,357	49·35
Canada Security	17,516,871	256,205	1·46	93,274	76,248	81·75
Canadian Fire	51,653,823	700,616	1·36	353,120	159,570	45·19
Canadian Indemnity	11,815,458	179,714	1·52	112,023	83,498	74·54
Canadian Lumbermen's	1,160,425	28,373	2·45	175	–	–
Canadian Surety	–	–	–	–	–	–
Cumberland Farmers	180,975	1,817	1·00	1,812	517	28·56
Dominion Fire	54,822,506	669,361	1·22	371,799	320,183	86·12
Dominion Gresham	1,896,106	22,840	1·20	17,307	143	0·82
Dominion of Canada Guarantee and Accident	20,751,974	194,075	0·94	109,045	36,886	33·83
Ensign	3,398,151	38,400	1·13	18,849	4,019	21·32
Fire Insurance Co. of Canada	49,019,709	540,073	1·10	255,727	133,630	52·26
General Accident of Canada	10,761,444	124,707	1·16	57,090	22,192	38·87
Globe Indemnity	37,552,744	372,370	0·99	153,608	70,999	46·22

[1] Figures subject to revision.

69.—Fire Insurance Business transacted in Canada, 1922[1]—con.

Companies.	Gross amount of risks taken during year.	Premiums charged thereon.	Rate of premiums per cent of risks.	Net cash received for premiums.	Net cash paid for losses.	Percentage of losses paid to premiums received.
	$	$	p.c.	$	$	p.c.
Canadian Companies—concluded.						
Grain Insurance	21,266,475	221,069	1·04	221,069	170,620	77·18
Guardian Insurance of Canada	21,182,221	236,439	1·12	71,089	32,806	46·15
Halifax Fire	4,666,190	65,277	1·40	38,538	21,550	55·92
Hudson Bay	26,715,206	334,666	1·25	181,214	103,090	56·89
Imperial Guarantee and Accident	–	–	–	–	–	–
Imperial Underwriters	35,837,896	370,614	1·03	156,864	105,335	67·15
Kings Mutual	2,242,240	23,368	1·04	22,365	18,244	81·57
Liverpool-Manitoba	44,787,187	510,302	1·14	250,987	155,786	62·07
London & Lancashire Guarantee and Accident	58,913	815	1·38	–	–	–
London Mutual	64,431,741	692,566	1·07	234,644	251,405	107·14
Mercantile	33,281,554	334,487	1·01	159,309	123,093	77·27
Merchants Casualty	–	–	–	–	–	–
Mount Royal	109,347,369	1,351,155	1·24	741,938	413,687	55·76
Mutual Fire	846,727	14,062	1·66	13,603	15,187	111·64
North American Accident	–	–	–	–	–	–
North Empire	29,511,576	362,406	1·23	159,064	158,805	99·84
North West	23,840,635	271,550	1·14	162,738	118,424	72·77
Occidental	39,829,075	559,925	1·41	275,264	174,472	63·38
Pacific Coast	33,859,886	340,891	1·01	175,818	91,706	52·16
Pacific Marine	271,980	4,818	1·77	−16,573	11,699	–
Pictou County Farmers	565,650	4,306	0·76	4,289	3,392	79·08
Quebec	39,157,687	421,362	1·08	143,539	90,367	62·96
Reliance	5,707,651	63,756	1·12	22,379	6,944	31·03
Scottish Canadian	13,715,994	185,419	1·35	68,531	33,695	49·17
Western	250,544,725	1,497,203	0·60	681,051	576,886	84·71
Totals	**1,359,266,138**	**14,141,589**	**1·04**	**6,727,638**	**4,685,638**	**69·65**
British Companies—						
Alliance	41,965,523	438,822	1·05	394,629	296,578	75·15
Atlas	88,093,848	1,024,692	1·16	805,685	662,414	82·22
Autocar	12,280,960	137,745	1·12	119,008	27,494	23·10
British Crown	54,008,756	701,377	1·30	492,553	359,772	73·04
British General	19,422,301	180,067	0·93	114,591	59,969	52·33
British Oak	18,036,766	213,011	1·18	169,597	74,818	44·12
British Traders	26,774,711	302,866	1·13	243,187	206,938	85·09
Caledonian	58,712,152	629,754	1·07	452,000	400,434	88·59
Car and General	35,670,346	310,234	0·87	212,167	83,248	39·24
Century	39,812,851	418,045	1·05	290,750	192,894	66·34
China	691,949	10,138	1·47	5,272	2,554	48·45
Commercial Union	137,412,548	1,243,024	0·90	952,638	722,233	75·81
Cornhill	5,581,809	53,479	0·96	50,008	2,545	5·09
Eagle, Star and British Dominions	67,179,512	595,762	0·89	433,495	326,680	75·36
Employers' Liability	91,326,432	922,232	1·01	700,730	518,777	74·03
Essex and Suffolk	21,775,757	242,552	1·11	92,675	64,246	69·32
General Accident, Fire	51,285,295	466,278	0·91	388,430	199,290	51·31
Guardian Assurance	154,556,932	1,869,634	1·21	1,588,450	1,472,898	92·73
Law, Union and Rock	42,482,364	432,629	1·02	347,197	165,471	47·66
Liverpool and London and Globe	158,659,278	1,798,769	1·13	1,463,103	900,135	61·52
London Guarantee	56,902,982	614,468	1·08	399,115	404,040	101·23
London and Lancashire	160,961,860	1,612,174	1·00	1,353,988	811,967	59·97
London Assurance	59,584,287	635,838	1·07	548,575	289,133	52·71
Marine	–	–	–	–	–	–
Merchants Marine	24,958,227	224,933	0·90	154,309	66,983	43·41
Motor Union	17,132,680	155,662	0·91	126,674	62,325	49·20
National Provincial Insurance	17,655,320	165,444	0·94	118,630	38,512	32·46
North British and Mercantile	131,074,011	1,423,368	1·09	1,110,364	869,198	78·28
Northern Assurance	105,981,645	1,220,995	1·15	1,018,178	893,344	87·74
Norwich Union Fire	117,548,672	1,360,153	1·16	1,102,638	763,295	69·22
Ocean, Accident and Guarantee	35,124,905	390,486	1·11	307,072	205,187	66·82
Palatine	46,943,420	526,330	1·12	398,227	342,208	85·93
Patriotic	10,690 863	101,615	0·95	82,531	30,928	37·47
Phœnix of London	146,789,282	1,641,389	1·12	1,216,611	820,017	67·40
Provincial	23,126,901	247,560	1·07	209,424	131,650	62·86
Queensland	30,532,340	335,910	1·10	281,554	188,037	66·79

[1]Figures subject to revision.

69.—Fire Insurance Business transacted in Canada, 1922[1]—con.

Companies.	Gross amount of risks taken during year.	Premiums charged thereon.	Rate of premiums per cent of risks.	Net cash received for premiums.	Net cash paid for losses.	Percentage of losses paid to premiums received.
	$	$	p.c.	$	$	p.c.
British Companies—concluded.						
Royal Exchange	81,791,271	826,871	1·01	590,696	334,495	56·63
Royal Insurance	234,215,198	2,329,119	0·99	1,886,929	1,182,095	62·65
Royal Scottish	24,928,309	272,504	1·09	209,189	141,280	67·54
Scottish Metropolitan	20,644,789	237,916	1·15	197,500	100,031	50·65
Scottish Union	46,853,920	464,681	0·99	399,898	203,837	50·97
Sun Insurance	93,908,335	1,085,256	1·16	893,942	622,302	69·61
Traders and General	–	–	–	–83,445	11,393	–
Union Assurance	98,864,351	916,219	0·93	698,021	587,066	84·10
Union of Canton	61,462,550	660,646	1·07	523,511	441,654	84·36
Union Marine	–	–	–	–	–	–
United British	7,880,509	74,434	0·94	63,630	8,982	14·12
Yangtsze	10,290,721	72,571	0·71	55,735	22,057	39·57
Yorkshire	48,681,469	595,320	1·22	471,526	602,857	127·85
Totals	**2,840,258,907**	**30,182,972**	**1·06**	**23,651,187**	**16,914,261**	**71·52**
Foreign Companies—						
Ætna	66,660,561	649,981	0·99	514,481	285,363	55·47
Agricultural	11,165,773	110,514	0·99	72,452	44,941	62·03
Alliance Insurance	21,275,285	207,389	0·97	161,890	89,631	55·37
American Alliance	1,624,165	23,012	1·42	6,844	5,894	86·12
American Central	32,701,717	314,131	0·96	251,409	164,835	65·56
American Equitable	15,597,474	175,268	1·12	146,068	88,497	60·59
American Exchange Underwriters	5,723,050	25,477	0·44	23,820	837	3·51
American Fire Ins. of New York	9,750,000	54,155	0·56	54,155	–	–
American Insurance	11,545,998	134,256	1·16	82,829	33,202	40·09
American Lloyds	7,385,040	48,426	0·66	42,356	9,317	21·99
Baloise	2,231,301	61,025	2·73	46,803	33,493	71·56
Boston	13,149,375	168,819	1·28	95,222	75,042	78·81
Caledonian-American	10,467,625	118,416	1·13	58,739	44,080	75·04
California	13,106,816	142,069	1·08	111,134	51,750	46·57
Citizens of Missouri	2,780,866	41,435	1·49	31,699	19,475	61·44
Columbia	17,448,895	195,270	1·12	121,391	87,421	72·02
Commercial Union of New York	1,165,132	17,096	1·47	6,640	2,711	40·83
Connecticut	31,792,713	319,777	1·01	206,536	106,188	51·41
Continental	64,561,275	685,025	1·06	495,039	271,453	54·83
Equitable Fire and Marine	26,316,160	238,123	0·90	52,323	25,271	48·30
Fidelity-Phenix	54,984,150	579,587	1·05	437,094	224,066	51·26
Fire Association of Philadelphia	8,125,851	103,211	1·27	70,664	36,775	52·04
Fire Reassurance Co. of New York	9,750,000	54,155	0·56	54,155	–	–
Fireman's Fund	27,035,685	253,166	0·94	183,273	196,753	107·35
Firemen's Insurance	9,225,471	110,985	1·20	96,336	26,384	27·39
Franklin	–	–	–	–	–	–
General of Paris	19,323,221	187,311	0·97	128,661	70,007	54·41
Girard	2,863,042	32,817	1·15	23,489	4,635	19·73
Glens Falls	32,400,301	344,450	1·06	214,850	151,599	70·56
Globe and Rutgers	115,758,364	1,017,834	0·88	811,792	835,472	102·92
Grain Dealers Mutual	629,750	12,888	2·05	8,018	6,950	86·68
Great American	70,990,008	721,730	1·02	505,718	381,946	75·53
Hardware Dealers	5,112,072	125,361	2·45	105,784	44,043	41·63
Hartford Fire	201,387,923	2,010,405	1·00	1,756,183	1,027,438	58·50
Home Insurance	189,472,443	2,270,053	1·20	1,815,772	1,442,083	79·42
Imperial Assurance	302,462	2,471	0·82	2,012	–	–
Individual Underwriters	25,938,499	104,903	0·40	50,695	9,669	19·07
Insurance Co. of North America	121,683,321	1,133,534	0·93	906,449	464,036	51·19
Insurance Co. of State of Pa	16,887,035	158,955	0·93	128,333	66,537	51·84
Lumbermen's Indemnity	10,242,289	242,339	2·37	164,682	185,914	112·89
Lumbermen's Underwriting	20,384,013	363,279	1·78	284,373	165,628	58·24
Lumber Underwriters	4,509,169	88,356	1·96	53,768	61,646	114·65
Manufacturing Lumbermens	13,692,391	251,631	1·84	191,977	97,377	50·72
Mechanics and Traders	1,200,431	28,901	2·41	18,736	15,555	83·02
Merchants Fire	18,251,790	188,734	1·03	164,485	102,622	62·39
Millers National	6,305,995	76,304	1·21	49,294	28,849	58·53
Minnesota Implement	5,112,072	125,361	2·45	105,784	44,043	41·63
National-Ben Franklin	16,960,072	204,255	1·20	170,353	83,303	48·90
National Fire of Hartford	75,457,603	922,602	1·22	701,660	384,196	54·76
National Union	25,897,649	293,669	1·13	203,776	172,623	84·71

69.—Fire Insurance Business transacted in Canada, 1922[1]—concluded.

Companies.	Gross amount of risks taken during year.	Premiums charged thereon.	Rate of premiums per cent of risks.	Net cash received for premiums.	Net cash paid for losses.	Percentage of losses paid to premiums received.
	$	$	p.c.	$	$	p.c.
Foreign Companies—concluded.						
La Nationale	63,594,102	750,790	1·18	569,031	328,136	57·67
Newark	16,758,925	194,806	1·16	108,177	84,709	78·31
New Hampshire	19,628,800	211,459	1·08	137,062	92,548	67·52
New Jersey	6,676,913	74,184	1·11	46,931	35,083	74·75
N.Y. Reciprocal Underwriters	26,307,012	87,652	0·33	8,720	8,810	101·15
Niagara	52,147,662	521,362	1·00	313,351	180,198	57·51
Northwestern Mutual	36,308,000	712,248	1·96	591,155	263,664	44·60
Northwestern National	29,608,260	367,716	1·24	325,263	139,148	42·78
Pacific Fire	10,059,585	90,691	0·82	78,288	45,340	57·91
Phenix of Paris	23,316,324	237,552	1·02	159,516	120,602	75·61
Phœnix of Hartford	67,453,956	708,499	1·05	398,123	223,678	56·18
Providence Washington	40,670,741	354,392	0·87	276,087	159,630	57·82
Queen of America	81,929,916	917,242	1·12	740,275	526,481	71·12
Retail Hardware	5,112,072	125,361	2·45	105,784	44,043	41·63
Rossia	19,500,000	108,311	0·56	108,310	–	–
St. Paul Fire and Marine	55,295,183	519,042	0·94	366,291	227,103	62·00
Security	11,291,618	122,041	1·09	82,053	44,138	53·79
Springfield	65,606,055	607,131	0·93	388,579	265,399	68·30
Sprinklered Risk	6,146,800	25,305	0·41	15,052	2,337	15·53
Sterling	28,265,020	213,522	0·76	68,875	37,246	54·08
Stuyvesant	13,803,856	155,399	1·13	121,501	76,776	63·19
Tokio	10,646,044	102,374	0·96	77,610	75,115	96·78
L'Union of Paris	31,912,854	373,310	1·17	305,866	234,427	76·64
United States Fire	23,026,888	181,720	0·79	130,556	75,945	58·17
Vulcan	8,848,101	93,334	1·05	−5,224	34,057	–
Westchester	36,290,355	386,002	1·06	242,773	154,217	63·52
Total	**2,266,542,335**	**23,980,356**	**1·06**	**17,750,001**	**11,248,380**	**63·37**
Grand Totals	**6,466,067,380**	**68,304,917**	**1·06**	**48,128,826**	**32,848,279**	**68·25**

70.—Assets of Canadian Companies Selling Fire Insurance Business, or Fire Insurance and other classes of Insurance, and Assets in Canada of Companies other than Canadian transacting such business in Canada, 1918-1922.

Items.	1918.	1919.	1920.	1921.	1922.[1]
	$	$	$	$	$
Canadian Companies—					
Real estate	1,428,921	2,027,655	2,009,353	2,515,633	2,838,112
Loans on real estate	2,232,143	2,101,585	2,275,827	2,723,882	2,600,941
Stocks, bonds and debentures	16,259,079	20,915,449	23,291,113	23,223,601	23,253,773
Agents' balances and premiums outstanding	3,412,180	4,950,477	5,535,073	3,622,844	3,500,280
Cash on hand and in banks[2]	4,542,576	4,538,576	4,997,250	3,372,212	3,194,659
Interest and rents	415,346	480,352	521,380	504,320	515,893
Other assets	443,740	682,642	1,010,843	913,236	2,132,413
Total assets	**28,733,985**	**35,696,736**	**39,640,839**	**36,875,728**	**38,036,071**
British Companies—					
Real estate	2,699,024	2,563,168	2,899,249	3,245,714	3,911,121
Loans on real estate	12,812,262	3,969,328	13,047,264	3,862,043	3,128,477
Stocks, bonds and debentures	22,972,016	24,460,316	32,024,536	33,012,921	35,594,762
Agents' balances and premiums outstanding	2,948,869	3,612,027	4,124,467	3,671,432	3,889,100
Cash on hand and in banks[2]	3,733,382	3,710,520	4,817,260	3,737,475	3,790,596
Interest and rents	549,132	225,742	819,590	297,468	311,984
Other assets in Canada	359,215	517,991	698,257	506,296	432,033
Total assets in Canada	**46,073,900**	**39,059,092**	**58,430,623**	**48,333,349**	**51,058,073**

[1]Unrevised figures.
[2]Or deposited with Governments.

70.—Assets of Canadian Companies selling Fire Insurance Business, or Fire Insurance and other classes of Insurance, and Assets in Canada of Companies other than Canadian transacting such business in Canada, 1918-1922—concluded.

Items.	1918.	1919.	1920.	1921.	1922.[2]
	$	$	$	$	$
Foreign Companies—					
Real estate	none	none	none	none	none
Loans on real estate	none	none	none	none	6,500
Stocks, bonds and debentures	12,752,667	13,840,421	17,745,711	20,453,162	21,370,225
Agents' balances and premiums outstanding	1,776,201	2,186,593	2,551,869	2,416,245	2,559,035
Cash on hand and in banks[1]	2,478,986	4,302,292	6,626,823	4,591,978	4,200,519
Interest and rents	148,362	158,401	183,333	216,573	226,029
Other assets	67,949	75,283	93,478	32,926	183,623
Total assets in Canada	**17,224,165**	**20,562,990**	**27,201,214**	**27,710,884**	**28,545,931**
All Companies—					
Real estate	4,127,945	4,590,823	4,908,602	5,761,347	6,749,233
Loans on real estate	15,044,405	6,070,913	15,323,091	6,585,925	5,735,918
Stocks, bonds and debentures	51,983,762	59,216,186	73,061,360	76,689,684	80,218,760
Agents' balances and premiums outstanding	8,137,250	10,749,097	12,211,409	9,710,521	9,948,415
Cash on hand and in banks[1]	10,754,944	12,551,388	16,441,333	11,701,665	11,185,774
Interest and rents	1,112,840	864,495	1,524,303	1,018,361	1,053,906
Other assets	870,904	1,275,916	1,802,578	1,452,458	2,748,069
Total assets in Canada	**92,032,050**	**95,318,818**	**125,272,676**	**112,919,961**	**117,640,075**

[1]Or deposited with Governments.

71.—Liabilities of Canadian Companies selling Fire Insurance Business, or Fire Insurance and other classes of Insurance, and Liabilities in Canada of Companies other than Canadian transacting such business in Canada, 1918-1922.

Items.	1918.	1919.	1920.	1921.	1922.[2]
	$	$	$	$	$
Canadian Companies—					
Unsettled losses	4,114,105	4,221,470	4,950,257	4,439,371	4,045,604
Reserve of unearned premiums	7,925,912	9,355,790	10,908,023	10,796,291	10,524,487
Sundry items	2,646,579	4,170,922	4,374,692	3,818,689	4,416,035
Total liabilities, not including capital	**14,686,596**	**17,748,182**	**20,232,972**	**19,054,351**	**18,986,126**
Excess of assets over liabilities, excluding capital	14,047,389	17,948,554	19,407,867	17,821,377	19,049,945
Capital stock paid up	11,323,256	12,937,306	13,884,478	14,096,696	14,927,193
British Companies—					
Unsettled losses	2,258,557	2,529,672	3,019,747	3,194,287	4,400,703
Reserve of unearned premiums	12,084,409	13,563,203	16,561,259	16,327,032	16,551,655
Sundry items	1,244,533	2,461,967	1,471,491	2,108,192	1,374,378
Total liabilities in Canada	**15,587,499**	**18,554,842**	**21,052,497**	**21,629,511**	**22,326,736**
Excess of assets over liabilities, excluding capital	30,486,401	20,504,250	37,378,126	26,703,838	28,731,337
Capital stock paid up	–	–	–	–	–
Foreign Companies—					
Unsettled losses	1,272,279	1,335,225	1,937,173	2,089,288	2,809,250
Reserve of unearned premiums	6,554,146	7,620,914	9,621,789	9,668,233	10,285,698
Sundry items	785,080	1,441,183	1,313,944	811,667	669,767
Total liabilities in Canada	**8,611,505**	**10,397,322**	**12,872,906**	**12,569,188**	**13,764,715**
Excess of assets over liabilities, excluding capital	8,612,660	10,165,668	14,328,308	15,141,686	14,781,216
Capital stock paid up	–	–	–	–	–
All companies—					
Unsettled losses	7,644,941	8,086,367	9,907,177	9,722,946	11,255,557
Reserve of unearned premiums	26,564,467	30,539,907	37,091,071	36,791,556	37,361,840
Sundry items	4,676,192	8,074,072	7,160,127	6,738,548	6,460,180
Total liabilities in Canada, not including capital	**38,885,600**	**46,700,346**	**54,158,375**	**53,253,050**	**55,077,577**
Excess of assets over liabilities, excluding capital	53,146,450	48,168,472	71,114,301	59,666,901	62,562,498
Capital stock paid up[1]	11,323,256	12,937,306	13,884,478	14,096,696	14,927,193

[1]Canadian companies only. [2]Unrevised figures.

72.—Cash Income and Expenditure of Canadian Companies selling Fire Insurance Business or Fire Insurance and other classes of Insurance, and Cash Income and Expenditure in Canada of Companies other than Canadian transacting such business in Canada, 1918-1922.

Items.	1918.	1919.	1920.	1921.	1922.[2]
INCOME.	$	$	$	$	$
Canadian Companies—					
Net cash for premiums from fire and other	17,586,476	18,329,956	21,662,202	19,302,371	19,487,560
Interest and dividends on stocks, etc.	962,863	1,240,566	1,424,109	1,558,982	1,551,610
Sundry items	28,398	65,674	190,538	189,824	794,781
Total cash income	**18,577,737**	**19,636,196**	**23,276,849**	**21,051,177**	**21,833,951**
British Companies[1]—					
Net cash for premiums	18,658,712	20,377,872	25,332,651	30,891,766	30,588,342
Interest and dividends on stocks, etc.	1,680,468	1,219,425	2,026,582	1,583,811	1,653,506
From branches other than Fire or Life	3,587,437	4,429,295	7,636,827	–	–
Sundry items	783	1,084	1,053	6,374	67,887
Total cash income	**23,927,400**	**26,027,676**	**34,997,113**	**32,481,951**	**32,309,735**
Foreign Companies[1]—					
Net cash for premiums	11,725,601	13,237,767	17,191,584	19,976,929	21,271,385
Interest and dividends on stocks, etc.	582,441	673,023	898,663	1,104,775	1,014,060
From branches other than Fire or Life	2,518,135	2,789,164	4,011,276	–	–
Sundry items	3,012	145	202	33,191	9,310
Total cash income	**14,829,189**	**16,700,099**	**22,101,725**	**21,114,895**	**22,294,755**
EXPENDITURE.					
Canadian Companies—					
Paid for losses	5,176,053	5,031,061	5,712,042	6,807,210	7,323,565
General expenses	4,018,550	4,498,537	5,418,225	5,451,726	4,989,557
On account of branches other than Fire or Life	6,386,814	7,571,999	9,487,924	9,201,593	7,746,522
Dividends or bonus to shareholders	490,482	869,195	1,087,082	842,083	776,046
Taxes	–	–	–	–	826,342
Total cash expenditure	**16,071,899**	**17,970,792**	**21,705,273**	**22,302,612**	**21,662,032**
Excess of income over expenditure	2,505,838	1,665,404	1,571,576	−1,251,435	171,919
British Companies[1]—					
Paid for losses	9,908,001	8,387,864	11,004,078	13,171,415	16,914,260
General expenses	6,320,803	7,121,830	9,020,281	9,404,545	8,631,334
On account of branches other than Fire or Life	2,997,315	4,233,299	6,665,666	7,961,092	6,300,540
Taxes	–	–	–	–	1,002,984
Total cash expenditure	**19,226,119**	**19,742,993**	**26,690,025**	**30,537,052**	**32,849,118**
Excess of income over expenditure	4,701,281	6,284,683	8,307,088	1,944,899	−539,383
Foreign Companies[1]—					
Paid for losses	6,709,347	5,555,268	7,751,902	10,300,938	11,248,381
General expenses	3,965,025	4,483,060	6,087,763	6,351,600	6,244,973
On account of branches other than Fire or Life	1,711,862	2,328,857	3,212,956	4,704,705	2,519,759
Taxes	–	–	–	–	793,693
Total cash expenditure	**12,386,234**	**12,367,185**	**17,052,621**	**21,357,243**	**20,806,806**
Excess of income over expenditure	2,442,955	4,332,914	5,049,104	−242,348	1,487,949

[1]Income and expenditure in Canada.
[2]Unrevised figures.

73.—Amount of Net Premiums written and Net Losses incurred in Canada, by Provinces, by Canadian, British and Foreign Companies transacting Fire Insurance Business, 1921 and 1922.

(Licensed re-insurance deducted.)

Provinces.	Canadian.		British.		Foreign.	
	Premiums.	Losses.	Premiums.	Losses.	Premiums.	Losses.
	$	$	$	$	$	$
1921.						
P. E. Island	39,920	19,615	136,116	54,179	63,946	31,346
Nova Scotia	477,910	398,744	1,043,308	787,666	1,083,113	873,267
New Brunswick	418,560	291,892	1,176,924	872,621	926,445	811,614
Quebec	2,245,642	1,561,192	5,708,531	3,646,369	3,844,473	2,476,578
Ontario	3,808,343	2,397,674	8,568,746	4,662,321	4,969,680	2,742,162
Manitoba	914,662	508,170	1,623,564	761,450	1,305,548	913,193
Saskatchewan	1,196,038	688,810	1,502,544	838,318	1,212,929	680,110
Alberta	965,664	529,527	1,406,432	806,501	1,230,685	672,813
British Columbia	836,706	275,268	2,161,917	764,478	1,883,487	1,135,626
Yukon	246	–	3,699	10	2,480	163
Total	**10,903,691**	**6,670,892**	**23,412,314**[1]	**13,248,577**[2]	**16,523,386**[3]	**10,336,872**
1922.						
P. E. Island	39,608	32,521	126,861	108,849	67,309	93,595
Nova Scotia	464,645	371,390	979,904	690,434	1,162,704	726,455
New Brunswick	374,912	374,738	1,119,865	1,019,163	910,377	763,009
Quebec	2,034,739	1,569,215	5,888,501	4,696,746	4,091,834	2,882,709
Ontario	3,281,589	2,451,699	8,701,400	6,598,609	5,434,833	3,364,936
Manitoba	815,111	559,375	1,631,016	1,158,184	1,395,285	955,183
Saskatchewan	1,048,033	610,731	1,465,454	724,160	1,328,475	644,866
Alberta	790,774	652,144	1,525,038	1,038,498	1,318,028	853,422
British Columbia	748,072	393,867	2,136,719	789,284	2,035,901	964,205
Yukon	–	–	6,691	2,271	3,464	–
Total	**9,597,483**	**7,015,680**	**23,651,186**[4]	**16,914,261**[5]	**17,750,004**[6]	**11,248,380**

[1] Includes $80,533 which cannot be separated according to provinces.
[2] Includes $54,664 which cannot be separated according to provinces.
[3] Includes $600 which cannot be separated according to provinces.
[4] Includes $69,737 which cannot be separated according to provinces.
[5] Includes $88,063 which cannot be separated according to provinces.
[6] Includes $1,791 which cannot be separated according to provinces.

Summary of Fire Insurance in Canada, 1921-1922.—Of the total amount of fire insurance effected in Canada during the years 1921 and 1922, a part was that sold by companies holding provincial licenses and permits. Such companies confine their operations generally to the province from which they receive authority to operate but are allowed at the same time to sell insurance in other provinces. The bulk of fire insurance business, however, is that done by Dominion licensees. Operations in 1921 and 1922 are summarized in Table 74.

74.—Dominion and Provincial Fire Insurance in Canada, 1921 and 1922.

Business transacted by	Net insurance written.	Net in force at end of year.	Net premiums received.	Net losses paid.
1921.	$	$	$	$
1. Dominion licensees	6,139,474,593	6,020,513,832	47,312,564	27,573,608
2. Provincial licensees—				
(a) Provincial companies within provinces by which they are incorporated	426,758,302	1,151,930,513	5,030,276	3,175,096
(b) Provincial companies within provinces other than those by which they are incorporated	37,844,371	117,833,922	515,273	369,724
Total for Provincial Companies	464,602,673	1,269,764,435	5,545,549	3,544,820
Grand Totals	**6,604,076,955**	**7,290,278,267**	**52,858,113**	**31,118,428**
1922.				
1. Dominion licensees	6,466,067,380	6,375,555,569	48,128,829	32,848,280
2. Provincial licensees—				
(a) Provincial companies within provinces by which they are incorporated	386,528,495	1,011,491,072	4,678,775	3,405,873
(b) Provincial companies within provinces other than those by which they are incorporated	6,510,439	24,709,887	211,852	175,134
Total for Provincial Companies	393,038,934	1,036,200,959	4,890,627	3,581,007
Grand Totals	**6,859,106,314**	**7,411,756,528**	**53,019,456**	**36,429,287**

75.—Fire Insurance carried on property in Canada in 1921, under Section 129 of the Insurance Act, 1917, by Companies, Associations or Underwriters not licensed to transact business in Canada.

Companies.	Amount of Insurance.
	$
Lloyds' Associations	38,315,706
Reciprocal Underwriters	31,223,752
Mutual Companies	314,332,315
Stock Companies	47,746,213
Total	**431,617,986**

Description of Property.	
	$
Lumber and Lumber Mills	21,772,417
Other Industrial Plants and Mercantile Establishments	273,450,004
Stock and Merchandise	129,127,436
Railway Property and Equipment	902,736
Miscellaneous	6,365,393
Total	**431,617,986**

Amount by Provinces.

	$		$
Prince Edward Island	342,075	Saskatchewan	3,405,770
Nova Scotia	4,954,747	Alberta	4,402,791
New Brunswick	14,211,508	British Columbia	21,929,393
Quebec	144,631,164	Yukon	4,000
Ontario	228,906,336	**Total**	**431,617,986**
Manitoba	8,830,202		

2.—Life Insurance.[1]

NOTE.—In this article the terms Hm and Om refer to the expectation of life tables of healthy males and ordinary males respectively, while 3½ p.c. and 4 p.c. are the assumed interest earning power of the money invested in life insurance companies. Om (5) means a table from which the low mortality of the first five years after the medical examination required on taking out life insurance policies is excluded.

Life Insurance business, introduced into Canada by companies from the British Isles and from the United States as a fairly well developed institution, and taken up almost as early along the same general lines by a native company, can hardly be said to have a distinctive Canadian history. The technique and practice show distinctly the effect of both British and United States influences. Among the first companies to transact life insurance business in Canada may be mentioned: Scottish Amicable (1846), Standard (1847), Canada (1847), Ætna (1850), Liverpool and London and Globe (1851) and Royal (1851). The late 60's and early 70's were stirring years in life insurance the world over. In England, the frenzied flotation of companies in this period gave rise to abuses which pointed to the necessity for some control over the formation and operation of companies. Statutes were passed in 1870, '71 and '72 embodying principles—"Freedom and Publicity"—which have, without any fundamental change, since governed in life insurance legislation in England; and in the year 1909 these same principles were extended and adapted to four kinds of insurance. In Canada no fewer than fourteen companies began business in the early seventies, including four native companies, namely, Sun (incorporated 1865, began business 1871), Mutual of Canada (Ontario Mutual, 1870), Confederation (1871) and London (1874). By 1875 there were at least twenty-six companies, possibly several more, competing for the available business in Canada, as against forty-three companies licensed by the Dominion, and a few provincial companies, in 1922. A comparison of the first and last lines in Table 76 is of interest in this connection.

The first Dominion Insurance Act was passed in 1868. It prohibited the transaction of insurance business by any company (except companies under provincial authority transacting business within the province) not licensed by the Minister of Finance. A deposit of $50,000 was required. The main provisions of this Act are traceable in the insurance legislation of the present day. Acts were passed in 1871, 1874, 1875 (consolidation, Fire and Inland Marine and provision for appointment of Superintendent of Insurance under Minister of Finance); 1875 (extending powers of Superintendent to life and other companies); 1877 (consolidating the laws in respect of insurance; quinquennial valuation of policies by Superintendent); 1885 (dealing with commercial insurance companies transacting business on the so-called co-operative or mutual plan, being what is known as assessment companies, fraternal societies excluded); 1886 (consolidation); 1894 (life insurance in combination with any other insurance business forbidden; issue of annuities and endowment assurances by assessment companies prohibited, and new assessment companies required to procure at least 500 applications for membership before license); 1895 (exempting certain fraternal organizations in hazardous occupations granting life, accident, sickness or disability insurance to members, from application of Insurance Act); 1895 (certain amendments as to foreign companies); 1899 (valuation standard change to Hm3½% applicable to business subsequent to January 1, 1900; all earlier business to be brought up to Hm 4% standard by 1910, and Hm 3½% by 1915); 1906 (consolidation); 1910 (including many new provisions and restrictions to some extent in harmony with the recommendations

[1]Contributed by A. D. Watson, B.A., Actuary, Department of Insurance, Ottawa.

of the Royal Commission on Insurance, 1906); 1917 (largely a new alignment necessitated by the Privy Council decision, 1915, in reference to sections 4 and 70 of the 1910 Act); 1919 (amendment affecting friendly societies); 1922 (miscellaneous amendments referred to below).

The legislation briefly reviewed above shows traces of the influence of British and United States legislation. In many respects it may be said to be mid-way between the "freedom and publicity" legislation of England and the inquisitorial and restrictive legislation of the United States. Following the disclosures of the "Armstrong" investigation in New York, a Royal Commission was appointed in 1906 to inquire into the conduct of life insurance business in Canada; and, under the same technical advisor as the "Armstrong Committee", the recommendations of the Commission were in the main the same as of that Committee. Many of the recommendations of the Commission, however, were not embodied in the legislation passed subsequent to the investigation. At the same time there is possibly a closer analogy between the Acts of 1910 and 1917 and certain United States statutes passed in recent years than obtained between the insurance legislation of the two countries at any earlier period. The valuation basis was changed by the 1910 Act to Om(5) 3½% and companies were authorized to include in life policies provision for waiver of premiums during total disability, and in event of total and permanent disability, to pay in full settlement of the policy an amount not exceeding the sum assured. The 1917 Act permitted the payment of a total and permanent disability benefit of like amount without any reduction in the sum assured. The legislation of 1919 and 1922 is dealt with below at greater length.

The development of life insurance in Canada, as in other English speaking countries at least, has been marked by an increased service to the individual policyholder. Under the stress of competition, companies more and more seek to bring the benefits of insurance within the reach of an ever-widening *clientèle;* and the benefits which may now be obtained under a life insurance policy are calculated to meet the needs of the policyholder and of his dependants, whether in event of old age or in event of death or of permanent disability. Policies may be obtained under which, if the policyholder becomes unable to follow any occupation by reason of ill-health or accident, not only do premiums cease, but in addition he receives an income under the policy without any reduction in the benefits formerly accruing to the beneficiary at death of the insured.

Within the last few years has been introduced what is known as "Group Insurance", a plan whereby a group of persons, usually employees, are insured by their employer for a uniform amount or an amount otherwise determined by a formula under one policy, generally on the term plan, the employer paying the premium, each employee having the right to obtain an individual policy at ordinary normal rates, without medical examination, on termination of employment. Under the "Group Policy" the expenses are less than if individual policies were issued on each life, and consequently the premiums are lower. The plan is as yet in the development stages, but seems to be filling a want.

Industrial life insurance, that is to say, the issue of policies of small amounts at weekly or monthly premiums paid to collectors or agents of the company who call at the home of the insured, is transacted along the same general lines as in other English-speaking countries. The unit premium is 5 cents per week, the sum assured, not the premium, varying with the age at issue of the policy. Children and the aged are alike insured. In some companies the business is written without any medical examination or inspection, other than inspection by the agent who procures the

application or in some cases by a salaried official. In some other companies, a simple medical examination is required for amounts of over, say, $300, but for smaller amounts applications are accepted from the agent as above, or the applicant may be required to appear before the medical examiner, but is not examined as ordinarily understood. The amount of the individual policy is small and the total amount on any one life under several policies is small. It really provides burial insurance for the poorer industrial classes. By reason of the frequent calls of the collectors and the small amount of each policy a large proportion of the premiums are absorbed in expenses. The companies concerned have been devoting their energies to devising ways and means of reducing the expense ratio, and with success, thus making possible better returns to policyholders. There are at present one Canadian, two United States and one Australian company transacting this business in Canada.

Two other phases in the development of life insurance in Canada require notice, namely, "assessmentism", as practised for a period by a few companies, and "fraternalism", as practised by friendly societies.

Assessmentism was an attempt to obtain life insurance protection at the lowest possible cost. In its cruder forms the age of the individual insured was ignored, except that entrance was restricted to fairly early life, a uniform, and usually low assessment being charged. There was provision in the contract for making additional assessments in certain contingencies—excessive deaths or reduction in funds of the company. It was held that as the means were thus at hand for meeting the exigencies of the business at any time, the companies were sound; and they seemed to be sound, even prosperous, to those unable to see beyond the surface of things, so long as a large proportion of the lives assured were at the early ages, say under 40 or 45 where the rates of mortality are low and fairly uniform. But after a considerable proportion of members had passed to the middle and old ages the weaknesses of the system soon began to be disclosed. The "new blood" theory was then developed, which, stated in simple terms, meant that enough young lives were to be induced to insure to keep the average mortality of the company as a whole at a low rate, thus obviating the necessity for excessive assessments. These young lives, however, in turn grew old and thus the aged became too numerous to be neutralized by "new blood"; assessments became frequent and consequently burdensome; healthy lives, especially the young, soon found they could get insurance much cheaper in ordinary companies and declined to pay the assessments. With their withdrawal, mortality, with no adequate reserves built up to draw upon, soon became unmanageable, and the final *débâcle* was in sight. It is impossible here to follow assessmentism through all its modifications in practice —merely attempts, perhaps generally honest enough, to bolster up an unsound system. The first of these companies appeared in Canada in 1885 and the last disappeared about 1907. Legislation in respect of these companies required that they should represent the nature of their business correctly to the public. A deposit of $50,000 was obligatory; death benefits were to be a first charge on all assessments; each policy had to state, "the association is not required by law to maintain the reserve which is required of ordinary life insurance companies"; and the words "Assessment System" were required to be printed on every policy, application, circular, etc.

Fraternal societies made their appearance in Canada at a very early date. So far as life insurance is concerned, the development is, as in the case of old line life companies, of more recent years. As above noted, they were at first exempt from

the provisions of the Dominion Acts applicable to assessment companies. Notwithstanding the exemption, fundamentally the business and the methods of the two types of institution as respects life insurance were fairly analogous, though the machinery differed. Eventually the provisions of the statutes originally designed for assessment companies were applied to fraternal societies, and continued to apply until the passing of the 1919 amendment to the Insurance Act.

The fate of friendly societies has been more fortunate than that of assessment companies. Many of them have gone through several readjustments of rates and benefits, and although this has meant loss in membership and a temporary setback, they are now doing business with due regard for sound principles. The 1919 amendment requires the benefit funds of friendly societies to be valued annually by an actuary, and if a deficiency in funds is shown, it must be made good within a reasonable period by an adjustment of rates or benefits. Thus, societies are in no way in the dark as to their actual condition, and if any weakness should be disclosed, the necessary remedy can be applied before anything in the nature of a serious situation arises.

It may be noted that an actuary performing valuations for a friendly society must be a Fellow of one or more of the following societies, namely, the Institute of Actuaries of Great Britain, the Faculty of Actuaries in Scotland or the Actuarial Society of America.

With the passing of the 1919 amendment, certain United States societies, previously transacting business in Canada under provincial authority, were required to obtain Dominion licenses or discontinue business. Up to July 15, 1923, thirteen of these societies were licensed, some of which were actuarially solvent at the date of first license; some have attained solvency since being licensed; the remainder have until March 31, 1925, to attain solvency; otherwise they must thereafter discontinue transacting business in Canada.

The 1922 amendment to the Insurance Act, 1917, in addition to some minor amendments, defines several new classes of insurance; permits life insurance companies to carry on other classes of insurance business under specified conditions; authorizes the issue of life policies, including indemnity benefits in event of accident or sickness, not exceeding a weekly payment of ½ p.c. of the sum assured, and an additional accidental death benefit not exceeding the sum assured; provides for the valuation of securities redeemable at a fixed date, if the market values are "unduly depressed", at values in excess of the market values, but not higher than the values shown in the next preceding annual statement of the company; it also requires Government approval of agents soliciting applications for insurance.

In 1894 an Act was passed (see above) forbidding the transaction of life insurance in combination with any other insurance business. As above noted, this principle was reversed by the 1922 amendment, which authorizes a life company, on passing a by-law confirmed by the members of the company and sanctioned by the Treasury Board, to engage in any and all other classes of insurance business, provided separate funds (not separate assets) and accounts are maintained in respect of the life insurance business and in respect of the other classes of insurance business transacted. Before commencing any new classes of business an initial fund is to be set up, the amount to be fixed by the Treasury Board depending on the number and nature of the additional classes of business to be undertaken, but not less than $50,000. For the purpose of setting up this initial fund a company may transfer thereto any amount to the credit of the shareholders' account in excess of paid up capital; also twenty-five p.c. of the surplus (allowance being made

for contingent allotments and accrued dividends to policyholders) in the life insurance fund. If any profit should be made on the additional classes of business, the life fund is to participate therein in the proportion of the amount so transferred from the life fund to the total amount transferred. Any fund so established may be liquidated under the Winding-up Act as though the company transacted no other class of business and the capital stock of the company subscribed (paid and unpaid) before the date of the separation of funds is liable only in respect of the business transacted before the separation of funds. No life company has to date (July 16, 1923) undertaken to do any other class of business under the amendment.

As noted above, the 1922 amendment requires soliciting agents to be approved by the Superintendent of Insurance, but it is also provided that approval shall be deemed to be granted unless and until the company is advised to the contrary.

The progress of life insurance in Canada may be studied from the tables appended.

Life Insurance Statistics.—The business of life insurance was transacted in Canada in 1922 by 56 active Dominion companies, including 25 Canadian, 15 British and 16 foreign companies.

As shown by the historical statistics of Table 76 the life insurance business in Canada has expanded from very small beginnings, the total life insurance in force in Dominion companies in 1869 being only $35,680,082, while in 1922 it was $3,172,764,844, the amount per head of the estimated population of Canada having doubled since 1916—an evidence of the general recognition of the fact that in view of the higher prices of commodities, a larger amount of life insurance is necessary for the adequate protection of dependants. Notable also from these historical statistics is the fact that in this field the British companies, which were the leaders in 1869, have fallen far behind the Canadian and the foreign companies. The total amount of new insurance effected during the year 1922 was $521,304,609, while the premiums paid were $106,886,179, as compared with $98,864,371 in 1921.

In Tables 77 and 78 detailed statistics are given of the business of Canadian, British and foreign companies respectively, by companies, in 1921 and 1922, while Table 79 is a summary showing the business of Canadian, British and foreign companies for the past five years. Table 80 gives the insurance death-rate by classes of companies. Tables 81, 82 and 83 show respectively the assets, liabilities and cash income and expenditure of Canadian and other life insurance companies for the years 1918 to 1922. Statistics of Dominion fraternal insurance are given in Table 84, and of Dominion and provincial insurance combined in Table 85, which shows that on December 31, 1922, the total life insurance in force in Canada was $3,533,769,038.

76.—Life Insurance in force and effected in Canada, 1869 to 1922.

Years.	Amount in Force.				Insurance in force per head of estimated population.	Amount of new Insurance effected during year.
	Canadian Companies.	British Companies.	Foreign Companies.	Total.		
	$	$	$	$	$ cts.	$
1869	5,476,358	16,318,475	13,885,249	35,680,082	10 45	12,854,132
1870	6,404,437	17,391,922	18,898,353	42,694,712	12 36	12,194,696
1871	8,711,111	18,405,325	18,709,499	45,825,935	13 15	13,332,626
1872	13,070,811	19,258,166	34,905,707	67,234,684	18 62	21,070,101
1873	15,777,197	18,862,191	42,861,508	77,500,896	21 13	21,053,618
1874	19,634,319	19,863,867	46,218,139	85,716,325	22 41	19,108,221
1875	21,957,296	19,455,607	43,596,361	85,009,264	21 87	15,074,258
1876	24,649,284	18,873,173	40,728,461	84,250,918	21 33	13,890,127
1877	26,870,224	19,349,204	39,468,475	85,687,903	21 35	13,534,667
1878	28,656,556	20,078,533	36,016,848	84,751,937	20 78	12,169,755
1879	33,246,543	19,410,829	33,616,330	86,273,702	20 81	11,354,224
1880	37,838,518	19,789,863	33,643,745	91,272,126	21 65	13,906,887
1881	46,041,591	20,983,092	36,266,249	103,290,932	23 88	17,618,011
1882	53,855,051	22,329,368	38,857,629	115,042,048	26 24	20,112,755
1883	59,213,609	23,511,712	41,471,554	124,196,875	28 02	21,572,960
1884	66,519,958	24,317,172	44,616,596	135,453,726	30 20	23,417,912
1885	74,591,139	25,930,272	49,440,735	149,962,146	33 04	27,164,988
1886	88,181,859	27,225,607	55,908,230	171,315,696	37 33	35,171,348
1887	101,796,754	28,163,329	61,734,187	191,694,270	41 33	38,008,310
1888	114,034,279	30,003,210	67,724,094	211,761,583	45 17	41,226,529
1889	125,125,692	30,488,618	76,349,392	231,963,702	48 94	44,556,937[1]
1890	135,218,990	31,613,730	81,591,847	248,424,567	51 83	40,523,456
1891	143,368,817	32,407,937	85,698,475	261,475,229	54 10	37,866,287
1892	154,709,077	33,692,706	90,708,482	279,110,265	57 09	44,620,013
1893	167,475,872	33,543,884	94,602,966	295,622,722	59 89	45,202,847
1894	177,511,846	33,911,885	96,737,705	308,161,436	62 96	49,525,257
1895	188,326,057	34,341,172	96,590,352	319,257,581	63 42	44,341,198
1896	195,303,042	34,837,448	97,660,009	327,800,499	64 45	42,624,570
1897	208,655,459	35,293,134	100,063,684	344,012,277	66 90	48,267,665
1898	226,209,636	36,606,195	105,708,154	368,523,985	70 88	54,764,673
1899	252,201,516	38,025,948	113,943,209	404,170,673	76 85	67,400,733
1900	267,151,086	39,485,344	124,433,416	431,069,846	81 00	68,896,092
1901	284,684,621	40,216,186	138,868,227	463,769,034	86 34	73,899,228
1902	308,202,596	41,556,245	159,053,464	508,812,305	91 98	80,552,966
1903	335,638,940	42,127,260	170,676,800	548,443,000	96 99	91,567,805
1904	364,640,166	42,608,738	180,631,886	587,880,790	100 92	98,306,102
1905	397,946,902	43,809,211	188,578,127	630,334,240	105 20	105,907,336
1906	420,864,847	45,644,951	189,740,102	656,260,900	106 35	95,013,205
1907	450,573,724	46,462,314	118,487,447	685,523,485	108 78	90,382,932
1908	490,266,931	46,161,957	193,087,126	719,516,014	110 85	99,896,206
1909	515,415,437	46,985,192	217,956,351	780,356,980	116 56	131,739,078
1910	565,667,110	47,816,775	242,629,174	856,113,059	123 77	152,762,520
1911	626,770,154	50,919,675	272,530,942	950,220,771	131 85	176,866,979
1912	706,656,117	54,537,725	309,114,827	1,070,308,669	145 32	219,205,103
1913	750,637,092	58,176,795	359,775,330	1,168,590,027	155 25	231,608,546
1914	794,520,423	60,770,658	386,869,397	1,242,160,478	161 47	217,006,516
1915	829,972,809	58,087,018	423,556,850	1,311,616,677	166 83	221,119,558
1916	895,528,435	59,151,931	467,499,266	1,422,179,632	176 99	231,101,625
1917	996,699,282	58,617,506	529,725,775	1,585,042,563	193 77	282,120,430
1918	1,105,503,447	60,296,113	619,261,713	1,785,061,273	214 33	313,251,556
1919	1,362,631,562	66,908,064	758,297,691	2,187,837,317	258 04	524,543,629
1920	1,664,348,605	76,883,090	915,793,798	2,657,025,493	307 83	641,778,095
1921	1,860,026,952	84,940,938	989,875,958	2,934,843,848	333 83	528,193,352
1922[2]	2,013,500,068	93,684,679	1,065,580,097	3,172,764,844	353 83	521,304,609

[1] Including 20 months' business of the Canada Life.
[2] Subject to revision.

77.—Life Insurance in force and effected in Canada, 1921.

Companies doing business.	Policies Issued.		Policies in Force.		Net Premium Income.	Net Amount of policies become claims.[1]
	No.	Gross Amount.	No.	Net Amount.		
		$		$	$	$
Canadian Companies—						
Canada	11,504	40,022,564	82,224	203,759,599	6,838,596	2,593,282
Capital	557	888,750	4,180	6,801,308	224,227	15,820
Commercial	381	1,027,052	1,022	2,648,785	57,260	–
Confederation	9,332	20,281,149	59,065	115,338,181	4,030,819	1,145,346
Continental	1,502	2,550,710	11,904	17,974,238	617,488	106,458
Crown	2,550	5,619,568	15,889	27,824,562	961,235	158,424
Dominion	4,435	10,897,739	25,630	49,713,585	1,675,369	321,457
T. Eaton	282	1,003,140	293	16,360,690	163,891	52,000
Excelsior	4,419	9,548,183	26,477	44,122,506	1,392,759	318,029
Great West	18,810	49,602,818	125,269	276,682,026	8,674,579	1,421,518
Imperial	6,911	20,689,734	50,231	110,002,957	3,912,768	727,068
London	61,773	28,949,705	305,544	110,998,164	4,035,844	600,785
Manufacturers	12,470	28,306,923	71,793	136,652,632	4,791,402	988,815
Monarch	2,174	5,429,519	12,913	27,613,409	767,391	73,510
Mutual of Canada	13,669	34,400,309	110,193	220,162,312	8,265,511	1,773,646
National of Canada	2,929	6,194,822	16,479	32,045,413	995,476	230,054
North American	8,185	17,033,460	52,909	95,674,928	3,201,909	832,618
Northern	2,635	5,326,870	15,751	25,356,986	797,089	210,603
Saskatchewan	438	974,731	2,195	4,564,192	145,930	13,500
Sauvegarde	1,535	2,734,209	8,264	11,005,141	378,532	55,616
Security	1,030	1,431,246	4,374	5,118,527	122,212	19,215
Sovereign	1,049	2,704,510	7,052	14,574,983	501,236	86,950
Sun	17,567	46,810,976	149,198	288,269,186	9,660,234	2,190,906
Travellers of Canada	1,901	3,868,099	7,635	12,192,622	423,068	23,750
Western	378	938,550	2,089	4,570,020	130,116	18,675
Total	**188,416**	**345,235,336**	**1,168,573**	**1,860,026,952**	**62,764,841**	**13,978,105**
British Companies—						
Commercial Union	2	1,487	151	543,744	16,993	31,005
Edinburgh[2]	–	–	9	17,606	183	5,281
Gresham	359	1,101,000	3,062	7,300,818	219,993	46,439
Life Association of Scotland[2]	–	–	108	206,853	2,914	57,330
Liverpool and London and Globe[2]	–	–	60	108,515	2,159	2,438
London and Scottish	557	1,444,937	8,449	17,252,822	625,442	353,318
Mutual Life and Citizens (Australia)	22,315	6,241,353	30,895	8,209,289	288,420	26,744
North British and Mercantile	42	448,500	489	1,869,974	117,085	26,249
Norwich Union[2]	–	–	58	86,782	2,478	1,643
Phœnix of London	60	479,533	2,300	7,644,790	228,305	158,099
Royal	577	3,376,902	4,933	17,547,095	564,484	111,321
Scottish Amicable[2]	–	–	16	41,377	614	–
Scottish Provident[2]	–	–	5	17,963	120	5,548
Standard	1,047	3,066,525	9,996	23,968,328	844,063	890,978
Star[2]	–	–	90	124,982	4,165	7,686
Total	**24,959**	**16,160,237**	**60,621**	**84,940,938**	**2,917,418**	**1,724,079**
Foreign Companies—						
Ætna	1,287	6,651,515	15,677	54,359,200	1,264,901	709,450
Connecticut Mutual[2]	–	–	436	852,151	20,438	27,767
Equitable	54	522,509	14,337	38,317,665	1,294,668	669,814
Guardian	–	–	52	191,401	9,203	2,108
Metropolitan	261,943	80,236,485	1,701,759	445,446,790	15,822,212	3,042,514
Mutual of New York	2,164	7,066,054	20,140	53,986,012	1,973,609	651,431
National of United States[2]	–	–	35	21,178	153	1,000
New York	6,408	16,248,884	57,213	123,059,327	4,380,911	1,465,129
Northwestern Mutual[2]	–	–	62	62,602	1,001	–
Phœnix Mutual[2]	–	–	131	100,472	19,626	46,002
Provident Savings[2]	–	–	560	867,189	25,247	31,500
Prudential	159,852	42,179,263	823,170	197,889,292	6,600,678	985,076
State	1	2,000	635	1,503,833	38,278	500
Travelers of Hartford	3,110	13,153,869	15,067	63,412,393	1,406,672	484,308
Union Mutual	219	706,700	4,141	9,107,697	301,968	123,653
United States	7	30,500	318	698,756	22,547	72,029
Total	**435,045**	**166,797,779**	**2,653,733**	**989,875,958**	**33,182,112**	**8,312,281**
Canadian Companies	188,416	345,235,336	1,168,573	1,860,026,952	62,764,841	13,978,105
British Companies	24,959	16,160,237	60,621	84,940,938	2,917,418	1,724,079
Foreign Companies	435,045	166,797,779	2,653,733	989,875,958	33,182,112	8,312,281
Grand Total	**648,420**	**528,193,352**	**3,882,927**	**2,934,843,848**	**98,864,371**	**24,014,465**

[1]Including matured endowments. [2]Ceased transacting new business in Canada.

78.—Life Insurance in force and effected in Canada, 1922.

Companies doing business.	Policies Issued.		Policies in Force.		Net Premium Income.	Net Amount of policies become claims.[1]
	No.	Gross Amount.	No.	Net Amount.		
Canadian Companies—		$		$	$	$
Canada	10,152	32,396,209	85,549	217,083,191	7,355,492	2,437,938
Capital	409	857,121	4,400	7,491,951	246,923	42,500
Commercial	462	1,156,365	1,585	3,885,859	89,369	11,000
Confederation	8,143	18,828,326	62,097	123,323,732	4,169,278	1,391,131
Continental	1,705	3,192,154	12,983	19,301,534	658,157	203,948
Crown	2,946	7,199,627	17,832	31,875,553	1,081,599	240,365
Dominion	4,326	10,531,193	28,075	55,703,665	1,880,152	364,179
T. Eaton	256	685,000	608	14,236,190	149,176	44,250
Excelsior	3,479	7,335,944	27,516	46,322,353	1,491,065	306,732
Great West	16,903	41,675,529	134,417	301,250,399	9,374,053	1,603,772
Imperial	6,513	20,190,276	52,960	119,279,876	4,352,320	862,240
London	62,568	33,344,907	327,811	129,576,841	4,425,420	717,342
Manufacturers	10,810	23,620,787	76,421	147,058,918	5,204,180	1,052,303
Monarch	2,462	5,869,860	14,375	30,605,700	868,408	77,340
Mutual of Canada	12,462	30,926,460	116,500	236,879,723	8,930,878	2,300,273
National of Canada	2,419	5,006,825	18,086	34,573,229	1,037,729	265,059
North American	6,779	14,057,493	53,558	97,341,435	3,363,779	1,044,779
Northern	2,801	6,942,905	17,065	29,307,287	913,437	231,034
Saskatchewan	531	978,115	2,511	4,959,021	169,336	13,000
Sauvegarde	1,943	2,822,594	9,865	13,341,516	408,156	100,000
Security	997	1,440,000	4,727	5,582,901	146,792	25,402
Sovereign	1,171	2,620,750	7,760	15,893,759	512,887	80,978
Sun	14,439	48,581,574	152,530	308,184,528	10,408,896	2,722,796
Travellers of Canada	2,063	4,755,662	8,828	14,719,912	492,933	51,000
Western	498	1,027,504	2,771	5,720,995	151,454	13,500
Total	**177,207**	**326,943,190**	**1,240,830**	**2,013,500,068**	**67,881,899**	**16,202,861**
British Companies—						
Commercial Union	3	15,000	146	547,369	17,564	6,199
Edinburgh[2]	–	–	8	16,875	145	972
Gresham	72	195,000	2,567	5,771,591	192,577	15,071
Life Association of Scotland[2]	–	–	92	182,903	2,123	25,157
Liverpool and London and Globe[2]	–	–	68	117,132	2,483	–
London and Scottish	1,140	2,368,209	9,015	18,330,116	562,587	434,743
Mutual Life and Citizens (Australia)	54,204	13,732,827	51,957	14,520,785	475,895	90,203
North British and Mercantile	58	201,500	512	1,971,060	69,599	19,739
Norwich Union[2]	–	–	52	78,690	1,846	8,093
Phœnix of London	71	302,125	2,241	7,496,993	211,439	93,503
Royal	671	3,818,983	5,226	19,663,205	618,426	259,568
Scottish Amicable[2]	–	–	12	30,099	513	11,278
Scottish Provident[2]	–	–	4	16,746	93	1,235
Standard	1,652	3,184,666	10,778	24,941,115	755,188	797,403
Star[2]	–	–	82	108,468	3,883	9,598
Total	**57,871**	**23,818,310**	**82,760**	**93,793,147**	**2,914,361**	**1,772,762**
Foreign Companies—						
Ætna	1,229	6,287,305	15,855	58,225,448	1,373,071	568,909
Connecticut Mutual[2]	–	–	422	828,071	17,354	25,727
Equitable	10	85,087	13,563	36,365,188	1,211,135	643,421
Guardian	–	–	47	186,666	9,036	3,875
Metropolitan	258,348	79,824,843	1,808,679	480,413,923	17,425,211	3,275,594
Mutual of New York	2,965	9,247,571	21,250	58,226,906	2,045,868	876,582
National of United States[2]	–	–	33	20,127	122	1,051
New York	5,603	15,027,559	58,422	128,519,388	4,502,647	1,392,208
Northwestern Mutual[2]	–	–	53	47,328	841	14,274
Phœnix Mutual[2]	–	–	118	90,683	21,489	9,789
Provident Savings[2]	–	–	486	750,161	21,040	50,732
Prudential	158,537	44,532,313	899,509	218,191,345	7,535,916	1,100,598
State	1	1,500	614	1,250,612	36,333	–
Travelers of Hartford	3,362	15,892,931	16,724	72,899,655	1,583,532	764,602
Union Mutual	171	523,000	3,939	8,823,884	286,529	99,660
United States	5	21,000	272	618,712	18,795	34,322
Total	**430,231**	**171,443,109**	**2,839,988**	**1,065,580,097**	**36,089,919**	**8,861,344**
Canadian Companies	177,207	326,043,190	1,240,830	2,013,500,068	67,881,899	16,202,861
British Companies	57,871	23,818,310	82,760	93,793,147	2,914,361	1,772,762
Foreign Companies	430,231	171,443,109	2,839,988	1,065,580,097	36,089,919	8,861,344
Grand Total	**665,309**	**521,304,609**	**4,163,578**	**3,172,873,312**	**106,886,179**	**26,836,967**

[1]Including matured endowments. [2]Ceased transacting new business in Canada.

NOTE.—The figures of the above table are subject to revision.

79.—Progress of Life Insurance in Canada, 1918-1922.

Items.	1918.	1919.	1920.	1921.	1922.[3]
Canadian Companies[1]—					
Policies new and taken up.....No.	132,585	198,527	208,512	188,416	177,207
Policies in force at end of year..... "	811,891	947,489	1,079,146	1,168,573	1,240,830
Policies become claims..... "	16,501	13,106	12,062	10,938	11,912
Amount of policies new and taken up $	179,429,315	320,150,705	397,553,184	345,235,336	326,043,190
Net amount of policies in force..... $	1,105,503,447	1,362,631,562	1,664,348,605	1,860,026,952	2,013,500,068
Net amount of policies become claims..... $	18,926,307	14,373,721	14,626,037	13,978,105	16,202,861
Amount of premiums in year..... $	38,728,815	47,126,374	57,205,082	62,764,841	67,881,899
Claims paid[2]..... $	16,063,901	17,454,054	14,491,847	14,093,985	16,070,012
Unsettled claims—					
Not resisted..... $	5,414,116	1,902,639	1,845,777	1,648,082	1,659,325
Resisted..... $	24,504	62,993	29,154	22,032	16,054
British Companies—					
Policies new and taken up.....No.	6,877	8,756	14,743	24,959	57,871
Policies in force at end of year..... "	38,040	42,232	50,691	60,621	82,760
Policies become claims..... "	956	936	897	930	1,326
Amount of policies new and taken up $	5,969,013	11,264,394	15,967,383	16,160,237	23,818,310
Net amount of policies in force..... $	60,296,113	66,908,064	76,883,090	84,940,938	93,793,147
Net amount of policies become claims..... $	1,674,214	1,803,020	1,782,399	1,724,079	1,772,762
Amount of premiums in year..... $	1,935,219	2,201,462	2,776,099	2,917,418	2,914,361
Claims paid[2]..... $	1,466,069	1,895,928	1,918,850	1,512,555	1,762,359
Unsettled claims—					
Not resisted..... $	519,175	382,258	233,254	336,954	239,422
Resisted..... $	53,000	2,208	-	10,633	10,000
Foreign Companies—					
Policies new and taken up.....No.	393,645	433,968	431,921	435,045	430,231
Policies in force at end of year..... "	1,942,045	2,200,603	2,444,166	2,653,733	2,839,988
Policies become claims..... "	30,005	27,144	29,294	25,613	26,842
Amount of policies new and taken up $	127,853,228	193,128,530	228,257,528	166,797,779	171,443,109
Net amount of policies in force..... $	619,261,713	758,297,691	915,793,798	989,875,958	1,065,580,097
Net amount of policies become claims..... $	9,381,768	8,339,561	9,036,366	8,312,281	8,861,344
Amount of premiums in year..... $	20,977,013	25,380,673	30,236,866	33,182,112	36,089,919
Claims paid[2]..... $	8,717,631	8,727,110	9,307,381	8,390,722	9,022,210
Unsettled claims—					
Not resisted..... $	1,359,971	852,393	511,363	427,516	448,639
Resisted..... $	67,627	41,199	138,278	119,425	86,298
All Companies—					
Policies new and taken up.....No.	533,107	641,251	655,176	648,420	665,309
Policies in force at end of year..... "	2,791,976	3,190,324	3,574,003	3,882,927	4,163,578
Policies become claims..... "	47,462	41,186	42,253	37,481	40,080
Amount of policies new and taken up $	313,251,556	524,543,629	641,778,095	528,193,352	521,304,609
Net amount of policies in force..... $	1,785,061,273	2,187,837,317	2,657,025,493	2,934,843,848	3,172,873,212
Net amount of policies become claims..... $	29,982,289	24,516,302	25,444,762	24,014,465	26,836,967
Amount of premiums in year..... $	61,641,047	74,708,509	90,218,047	98,864,371	106,886,179
Claims paid[2]..... $	26,247,601	28,077,092	25,718,078	23,997,262	26,854,581
Unsettled claims—					
Not resisted..... $	7,293,262	3,137,290	2,590,394	2,412,552	2,347,386
Resisted..... $	145,131	106,400	167,432	152,081	112,352

[1] Figures of Canadian business only.
[2] Including matured endowments.
[3] Figures for 1922 are subject to revision.

80.—Insurance Death-rate in Canada, 1918-1921.

Companies.	1918.			1919.		
	Number of lives exposed to risk.	Number of deaths.	Death-rate per 1,000.	Number of lives exposed to risk.	Number of deaths.	Death-rate per 1,000.
Active companies, ordinary	880,859	13,011	14·8	1,008,389	7,581	7·5
Active companies, industrial	1,762,147	23,657	13·4	1,989,367	16,548	8·3
Assessment and fraternal societies	115,360	2,112	18·3	151,085	1,909	12·6
Non-active and retired companies	2,284	107	46·8	2,125	118	55·5
Total	**2,760,650**	**38,887**	**14·1**	**3,150,966**	**26,156**	**8·3**
	1920.			1921.		
Active companies, ordinary	1,177,608	8,125	6·9	1,304,130	7,406	5·7
Active companies, industrial	2,215,815	18,634	8·4	2,434,322	16,692	6·9
Assessment and fraternal societies	206,066	2,643	12·8	217,259	2,437	11·2
Non-active and retired companies	1,974	173	87·6	1,736	123	70·9
Total	**3,601,463**	**29,575**	**8·2**	**3,957,447**	**26,658**	**6·7**

NOTE.—Average death-rate for all companies in the twenty-one years 1901–1921 was 9·5.

81.—Assets of Canadian Life Companies and Assets in Canada of Life Companies other than Canadian Companies, 1918-1922.

Items.	1918.	1919.	1920.	1921.	1922.[3]
	$	$	$	$	$
Canadian Companies—					
Real estate	16,297,408	16,791,000	17,170,659	18,074,628	19,455,390
Loans on real estate	90,653,299	91,325,101	102,895,691	119,895,623	139,566,030
Loans on collaterals	1,225,805	1,761,166	1,632,889	1,379,623	2,494,227
Cash loans and premium obligations on policies in force	43,884,451	44,611,927	49,303,632	60,230,729	77,798,470
Stocks, bonds and debentures	179,671,910	204,639,727	227,785,614	243,136,645	277,228,250
Interest and rent due and accrued	7,442,414	8,061,833	9,266,513	11,266,946	13,770,488
Cash on hand and in banks[1]	3,903,597	2,403,405	2,924,976	4,517,661	5,028,483
Outstanding and deferred premiums	7,818,704	9,019,887	11,120,733	13,825,291	15,601,979
Other assets	209,302	293,744	150,486	553,162	871,386
Total assets	**351,106,890**	**378,907,790**	**423,251,193**	**472,880,308**	**551,814,703**[2]
British Companies—					
Real estate	1,112,914	1,306,036	917,498	895,402	753,492
Loans on real estate	14,222,507	12,998,447	12,727,404	10,655,634	10,127,634
Loans on collaterals	166,934	18,770	12,165	5,046	4,692
Cash loans and premium obligations on policies in force	2,532,382	2,446,603	2,602,592	3,043,111	3,197,990
Stocks, bonds and debentures	17,819,067	20,036,680	19,636,657	21,480,909	25,259,619
Interest and rent due and accrued	463,106	417,433	402,639	396,519	393,252
Cash on hand and in banks[1]	677,197	756,488	777,234	848,501	842,798
Outstanding and deferred premiums	354,537	350,585	387,443	436,909	494,955
Other assets	373,187	35,820	57,369	58,683	47,310
Total assets in Canada	**37,721,831**	**38,366,862**	**37,521,001**	**37,820,714**	**41,121,742**
Foreign Companies—					
Real estate	120,295	221,013	218,132	543,524	507,719
Loans on real estate	10,639,987	10,063,742	9,143,873	9,049,828	8,760,587
Loans on collaterals	30,627	none	15,000	15,000	35,000
Cash loans and premium obligations on policies in force	11,172,030	11,318,518	12,023,992	14,002,977	15,990,500
Stocks, bonds and debentures	71,502,264	86,090,541	99,409,049	114,073,322	134,185,635
Interest and rent due and accrued	1,309,586	1,390,927	1,518,272	1,747,341	2,180,204
Cash on hand and in banks[1]	1,997,886	2,077,111	3,919,390	4,344,550	2,625,276
Outstanding and deferred premiums	1,828,015	2,296,416	2,808,887	3,161,859	3,398,398
Other assets	6,498	16,281	16,993	15,377	1,673
Total assets in Canada	**98,607,188**	**113,474,549**	**129,072,888**	**145,953,778**	**167,684,992**

[1] Includes cash deposit with Government.

[2] The figure in the text is the book value; the market value of these assets was $348,709,244 in 1918, $376,604,050 in 1919, $420,018,399 in 1920, $471,103,446 in 1921 and $555,635,494 in 1922.

[3] The figures for 1922 are subject to revision.

NOTE.—Certain British Companies transacting fire insurance in Canada transact also life insurance in Canada, and insomuch as a separation of assets has not been made between these two classes, their assets in Canada are not here included, but are included in the assets of British companies shown in Table 70 on page 844.

82.—Liabilities of Canadian Life Companies and Liabilities in Canada of Life Companies other than Canadian Companies, 1918-1922.

Schedule.	1918.	1919.	1920.	1921.	1922.[2]
	$	$	$	$	$
Canadian Companies—					
Unsettled claims	7,752,308	3,920,563	3,505,478	3,234,416	3,982,634
Net re-insurance reserve	291,035,397	321,027,592	359,548,337	402,023,210	467,013,948
Sundry liabilities	11,560,484	16,220,206	19,478,309	31,017,305	44,186,852
Total liabilities, not including capital	**310,348,189**	**341,168,361**	**382,532,124**	**436,274,931**	**515,183,434**
Surplus of assets excluding capital	38,361,055	35,435,689	37,486,275	34,828,515	40,452,060
Capital stock paid up	5,921,342	5,980,407	6,166,044	6,572,460	6,629,009
British Companies[1]—					
Unsettled claims	572,175	384,466	233,253	347,587	249,422
Net re-insurance reserve	19,075,622	19,361,479	20,483,379	22,061,174	22,621,893
Sundry liabilities	67,198	157,757	201,123	123,365	219,552
Total liabilities, not including capital	**19,714,995**	**19,903,702**	**20,917,755**	**22,532,126**	**23,090,867**
Surplus of assets	18,006,836	18,463,160	16,682,334	15,335,119	18,074,955
Foreign Companies[1]—					
Unsettled claims	1,427,598	893,592	649,641	546,941	534,936
Net re-insurance reserve	92,346,507	104,220,027	114,561,395	126,971,831	139,690,502
Sundry liabilities	3,515,199	3,621,881	4,413,133	5,438,027	7,946,695
Total liabilities, not including capital	**97,289,304**	**108,735,500**	**119,624,169**	**132,956,799**	**148,172,133**
Surplus of assets	1,317,884	4,739,049	9,448,719	13,996,979	19,512,859
All Companies—					
Unsettled claims	9,752,081	5,198,621	4,388,372	4,128,944	4,766,992
Net re-insurance reserve	402,457,526	444,609,098	494,593,111	551,056,215	629,326,343
Sundry liabilities	15,142,881	19,999,844	24,092,565	36,578,697	52,353,099
Total liabilities, not including capital	**427,352,488**	**469,807,563**	**523,074,048**	**591,763,856**	**686,446 434**
Surplus of assets excluding capital	57,685,775	58,637,898	63,617,328	64,160,613	78,039,874
Capital stock paid up[3]	5,921,342	5,980,407	6,166,044	6,572,460	6,629,009

[1] Liabilities in Canada. [2] Figures for 1922 are subject to revision. [3] Canadian companies only.

83.—Cash Income and Expenditure of Canadian Life Companies and Cash Income and Expenditure in Canada of Life Companies other than Canadian Companies, 1918-1922.

Schedule.	1918.	1919.	1920.	1921.	1922.[2]
Income.	$	$	$	$	$
Canadian Companies—					
Net premium income	53,188,261	64,433,449	78,725,400	84,808,432	94,275,510
Consideration for annuities	1,622,847	2,519,957	2,075,407	1,909,861	2,779,506
Interest and dividends on stocks, etc...	18,986,651	19,911,623	21,631,593	24,257,582	28,020,230
Sundry items	1,479,332	1,766,153	2,207,453	1,987,555	2,735,377
Total cash income	**75,277,091**	**88,631,182**	**104,639,853**	**112,963,430**	**127,810,623**
British Companies—					
Net premium income	1,935,219	2,201,462	2,776,099	2,917,419	2,914,362
Consideration for annuities	9,771	1,050	131	130	18,313
Interest and dividends on stocks, etc...	1,851,191	1,977,211	1,838,218	1,785,684	1,829,868
Sundry items	14,797	86,640	337,771	82,831	117,742
Total cash income[1]	**3,810,978**	**4,266,363**	**4,952,219**	**4,786,064**	**4,880,285**
Foreign Companies—					
Net premium income	20,977,014	25,380,673	30,236,866	33,182,114	36,089,919
Consideration for annuities	15,750	40,066	21,059	35,696	45,304
Interest and dividends on stocks, etc...	4,747,572	5,189,215	5,890,062	6,581,194	7,698,766
Sundry items	375,416	431,784	630,860	680,764	604,648
Total cash income[1]	**26,115,752**	**31,041,738**	**36,778,847**	**40,479,768**	**44,438,637**

[1] Income and expenditure in Canada. [2] The figures for 1922 are subject to revision.

83.—Cash Income and Expenditure of Canadian Life Companies and Cash Income and Expenditure in Canada of Life Companies other than Canadian Companies 1918-1922—concluded.

Schedule.	1918.	1919.	1920.	1921.	1922.[2]
EXPENDITURE.	$	$	$	$	$
Canadian Companies—					
Payments to policyholders	33,137,434	38,477,058	36,986,070	37,311,393	47,510,829
General expenses	16,170,006	21,912,380	26,755,643	27,463,385	28,781,005
Dividends to stockholders	553,192	558,021	957,077	728,057	882,977
Total expenditure	**49,860,632**	**60,947,459**	**64,698,790**	**65,502,835**	**77,174,811**
Excess of income over expenditure	25,416,459	27,683,723	39,941,063	47,460,595	50,635,812
British Companies—					
Payments to policyholders	1,706,934	2,149,843	2,407,707	1,875,502	2,194,888
General expenses	530,003	667,253	1,065,870	1,242,504	1,271,667
Dividends to stockholders	–	–	–	–	–
Total expenditure[1]	**2,236,937**	**2,817,096**	**3,473,577**	**3,118,006**	**3,466,555**
Excess of income over expenditure	1,574,041	1,449,267	1,478,642	1,668,058	1,413,730
Foreign Companies—					
Payments to policyholders	11,969,716	12,386,608	14,044,279	13,847,206	16,532,747
General expenses	5,756,211	7,149,276	8,039,873	8,255,026	8,535,260
Dividends to stockholders	–	–	–	–	–
Total expenditure[1]	**17,725,927**	**19,535,884**	**22,084,152**	**22,102,232**	**25,068,007**
Excess of income over expenditure	8,389,825	11,505,854	14,694,695	18,377,536	19,370,630

[1] Income and expenditure in Canada. [2] The figures for 1922 are subject to revision.

Life Insurance on the Assessment Plan—Table 84 gives statistics of life insurance on the assessment plan, that is, insurance effected through fraternal or friendly societies by assessments on the members thereof and with annual dues to meet expenses. The statistics in this table relate, however, only to the eight Canadian societies reporting to the Insurance Department of the Dominion Government, viz., the Alliance Nationale, the Ancient Order of Foresters, the Artisans Canadiens, the Catholic Mutual Benefit Association, the Commercial Travellers' Mutual Benefit Society, the Independent Order of Foresters (whose statistics include sick and funeral departments), the Royal Guardians and the Woodmen of the World.

Under an amendment to the Insurance Act which became effective January 1, 1920, it became necessary for all foreign fraternal societies previously transacting business in Canada under provincial licenses to obtain licenses under the Insurance Act in order to be permitted to continue to issue new insurance in Canada. Ten such societies obtained such licenses, viz., the Ladies' Catholic Benevolent Association, the Maccabees, Royal Arcanum, Woman's Benefit Association of the Maccabees, Catholic Order of Foresters, the Workmen's Circle, Knights of Columbus, Association Canada-Américaine, Western Mutual Life Association and Knights of Pythias, while the Jewish National Workers' Alliance of America has also obtained a license.

84.—Life Insurance on the Assessment Plan, 1918-1922.

Items.	1918.	1919.	1920.[1]	1921.[1]	1922.[1]
Number certificates taken	7,193	12,155	14,234	11,623	13,529
Number certificates become claims	2,647	2,786	2,773	2,417	2,699
	$	$	$	$	$
Amount paid by members	2,679,637	2,654,835	2,691,826	2,651,098	2,971,934
Amount of certificates new and taken up	5,497,819	10,405,843	12,727,091	10,774,992	10,037,300
Net amount in force	129,053,773	134,055,399	137,057,828	136,427,453	132,656,090
Amount of certificates become claims	2,555,462	2,643,671	2,636,213	2,319,302	2,394,682
Claims paid	3,037,860	2,997,753	2,723,725	2,397,681	2,617,821
Unsettled claims—					
Not resisted	387,193	180,919	192,715	191,841	174,709
Resisted	2,500	1,922	2,000	1,000	–
Amount terminated by—					
Death	4,381,610	1,900,633	1,868,508	1,645,521	1,659,196
Surrender, expiry, or lapse, etc.	14,849,510	12,163,679	10,961,533	11,409,840	18,439,896
Total terminated	19,231,120	14,064,312	12,830,041	13,055,361	20,099,092
Assets—					
Real estate	1,428,123	1,357,738	1,376,462	1,547,378	1,629,223
Loans on real estate	7,789,646	7,418,138	7,445,923	7,823,510	8,609,963
Policy loans (liens arising out of re-adjustment)	26,013,580	24,000,472	23,406,179	22,638,544	18,797,174
Stocks, bonds and debentures	16,303,729	20,307,673	21,825,835	22,190,818	25,814,991
Cash on hand and in banks	264,221	609,790	476,693	799,144	846,155
Interest and rent due and accrued	747,850	650,515	721,046	835,500	679,798
Dues from members	164,346	235,262	211,553	213,162	212,703
Other assets	4,316,012	4,976,927	4,993,270	5,572,258	5,036,375
Total assets	**57,027,507**	**59,556,515**[2]	**60,456,941**[2]	**61,620,314**[2]	**61,626,382**[2]
Liabilities—					
Claims, unsettled	590,647	305,672	279,971	292,156	261,285
Reserve[3]	53,550,029	54,187,476	55,327,610	56,601,595	56,430,585
Due on account of general expenses	2,159,159	1,063,370	514,684	1,036,905	1,403,659
Other liabilities					
Total liabilities	**56,299,835**	**55,556,518**	**56,122,265**	**57,930,656**	**58,095,529**
Income—					
Assessments	5,595,406	5,308,692	5,441,478	5,443,211	5,702,312
Fees and dues	173,837	378,641	415,759	464,810	468,258
Interest and rents	2,579,591	2,482,912	2,549,961	2,659,286	2,685,835
Other receipts	15,727	136,408	52,839	56,328	97,501
Total income	**8,364,561**	**8,306,653**	**8,460,037**	**8,623,635**	**8,953,906**
Expenditure—					
Paid to members	6,269,903	6,007,306	5,547,411	5,042,055	5,498,138
General expenses	1,091,611	1,150,358	1,311,921	2,664,942	1,720,633
Total expenditure	**7,361,514**	**7,157,664**	**6,859,332**	**7,706,997**	**7,218,771**
Excess of income over expenditure	1,003,047	1,148,989	1,600,705	916,638	1,735,135

[1]Canadian Fraternal Benefit Societies only (business in Canada).
[2]The figure in the text is the book value; the market value of these assets was $57,052,508 in 1919, $57,965,864 in 1920, $59,635,458 in 1921 and $60,301,249 in 1922.
[3]Independent Order of Foresters, $43,803,952 in 1918; $44,031,640 in 1919; $41,972,863 in 1920; $42,128,649 in 1921 and $39,852,318 in 1922. Including a special reserve of $1,600,000 in 1918, $1,000,000 in 1919, $1,000,000 in 1920, $600,000 in 1921 and $1,000,000 in 1922.

Summary of Life Insurance in Canada, 1921 and 1922.—In addition to the business transacted by life insurance companies incorporated by the Dominion Government to carry on business throughout the country, a considerable volume is also effected by companies operating under provincial licenses or otherwise permitted by the Provincial Governments to carry on such transactions. Statistics of these provincial companies have been collected since 1915 by the Department of

Insurance. Table 85, showing policies issued and in force, premiums received and losses paid as at Dec. 31, 1921 and 1922, illustrates the volume of business done by both life companies and fraternal societies as Dominion and Provincial licensees in these years.

85.—Dominion and Provincial Life Insurance in Canada, 1921 and 1922.

Business transacted by	New policies issued (gross).	Net in force Dec. 31.	Net premiums received.	Net death claims paid.
1921.	$	$	$	$
1. Dominion licensees—				
(a) Life companies	577,207,829	2,934,843,848	99,015,081	24,251,398
(b) Fraternals	16,347,692	202,549,447	3,731,135	3,260,994
Totals	**593,555,521**	**3,137,393,295**	**102,746,216**	**27,512,392**
2. Provincial licensees—				
(a) Provincial companies within provinces by which they are incorporated—				
(i) Life companies	9,198,331	20,680,027	590,324	82,587
(ii) Fraternals	4,726,665	122,592,482	2,587,839	2,069,138
(b) Provincial companies in provinces other than those by which they are incorporated—				
(i) Life companies	3,914,888	9,395,013	243,296	33,100
(ii) Fraternals	4,718,200	70,203,656	967,549	627,252
Totals for Provincial companies	**22,558,084**	**222,871,178**	**4,389,008**	**2,812,077**
Grand Totals	**616,113,605**	**3,360,264,473**	**107,135,224**	**30,324,469**
1922.				
1. Dominion licensees—				
(a) Life companies	579,090,402	3,172,873,312	107,103,572	27,129,578
(b) Fraternals	14,989,100	185,515,525	4,185,205	3,717,025
Totals	**594,079,502**	**3,358,388,837**	**111,288,777**	**30,846,603**
2. Provincial licensees—				
(a) Provincial companies within provinces by which they are incorporated—				
(i) Life companies	12,243,261	24,538,407	666,956	74,967
(ii) Fraternals	2,200,005	95,144,420	2,752,560	1,977,728
(b) Provincial companies in provinces other than those by which they are incorporated—				
(i) Life companies	4,589,281	7,895,838	217,400	20,309
(ii) Fraternals	2,505,914	47,801,536	692,800	533,054
Totals for Provincial companies	**21,538,461**	**175,380,201**	**4,329,716**	**2,606,058**
Grand Totals	**615,617,963**	**3,533,769,038**	**115,618,493**	**33,452,661**

3.—Miscellaneous Insurance.

Since 1875 the growth of insurance business other than fire or life has been a steady one. The report of the Superintendent of Insurance for the calendar year 1880 shows that the number of companies duly licensed for the transaction of accident, guarantee, plate glass and steam boiler insurance—the only four classes of miscellaneous insurance then transacted—was 5, 3, 1 and 1 respectively. The same report for the year 1922 shows that miscellaneous insurance now includes in Canada, accident, sickness, automobile, burglary, explosion, forgery, guarantee, hail, inland transportation, employers' liability, aviation, plate glass, sprinkler leakage, steam boiler, title, tornado and live stock insurance, etc. Whereas in 1880, 10 companies transacted business of this kind, such insurance is now sold by 138 companies, of which 34 are Canadian and 104 British and foreign.

Accident Insurance.—The first license of this kind was issued to the Travelers' Co. of Hartford, Conn., in 1868. The first license to a Canadian Co. was that issued to the Accident Insurance Co. of Canada, which was organized in 1872 and commenced business in 1874. Much accident insurance has also been sold by companies doing primarily a life insurance business.

Automobile Insurance.—This is now one of the most important branches of the miscellaneous class of insurance. Premiums increased from $80,446 in 1910 to $573,604 in 1915, and to $6,116,140 in 1922, with an increase in the number of companies from 7 to 85 during the 12 year period.

Plate Glass Insurance.—Policies were first sold in Canada by the Metropolitan Plate Glass Insurance Co., an American concern which withdrew from Canada during 1882 to avoid business restrictions. The 29 companies operating in Canada in 1922 received premiums of $708,748 and paid claims of $215,584.

Burglary Insurance.—This type of insurance received but slight attention in Canada until 1918. In 1893, however, one company issued burglary policies. A second followed in 1905, and in 1910 five companies were operating, while at the end of 1922, 25 companies were licensed to do burglary business. For 1922 the premium income of all companies amounted to $726,076, and the losses paid amounted to $340,214.

86.—Insurance other than Fire and Life, 1922.[3]

Types of Insurance.	Premiums.	Losses incurred.	Unsettled Claims.	
			Not resisted.	Resisted.
	$	$	$	$
Guarantee	1,468,652	543,871	353,636	302,994
Personal Accident	2,425,201	1,029,827	242,290	725
Personal Accident and Sickness	1,282,269	652,259	131,266	75
Employers' Liability	2,334,690	1,119,546	785,883	52,635
Sickness	1,584,872	973,403	204,913	4,150
Burglary	726,076	340,214	66,282	34,217
Steam Boiler	300,126	10,849	10,033	11,767
Hail	4,402,427	1,635,347	1,925	–
Inland Transportation	280,764	59,769	15,039	–
Plate Glass	708,748	215,584	31,540	–
Automobile[1]	2,481,802	1,418,667	264,676	53,362
Automobile[2]	3,634,338	1,332,511	435,814	54,705
Sprinkler Leakage	92,826	39,293	11,133	–
Live Stock	87,934	60,015	8,985	–
Tornado	153,787	38,058	4,076	–
Explosion	64,284	–	–	–
Forgery	18,719	5,572	56	–
Rain	29,348	21,187	65	–
Robbery	18,572	–	–	–

[1]Including fire risk. [2]Excluding fire risk. [3]Dominion licensces only.

87.—Income and Expenditure and Assets and Liabilities of Canadian Companies doing only Insurance Business other than Fire and Life, 1922.

Companies.	Cash Income.	Cash Expenditure.	Excess of Income over Expenditure.	Assets.	Liabilities. [1]	Excess of Assets over Liabilities.
	$	$	$	$	$	$
Boiler Inspection	175,363	140,373	34,990	535,263	175,878	359,385
Casualty Co. of Canada	166,022	95,577	70,445	156,180	55,381	100,799
Chartered Trust and Executor Co.	145,009	120,901	24,108	1,291,152	729,612	561,540
Fidelity Insurance Company	77,307	17,922	59,385	317,729	24,055	293,674
General Animals	69,199	60,972	8,227	87,003	32,669	54,334
Guarantee Co. of N. A.	522,379	427,193	95,186	2,879,689	662,419	2,217,270
Merchants' and Employers' Guarantee and Accident	243,562	225,343	18,219	203,459	103,998	99,461
Protective Association of Canada	273,285	248,415	24,870	169,781	97,536	72,245
Total	**1,672,126**	**1,336,696**	**335,430**	**5,640,256**	**1,881,548**	**3,758,708**

[1] Not including capital stock.

88.—Income and Expenditure in Canada of Companies, other than Canadian, doing only Insurance Business other than Fire and Life, 1922.

Companies.	Income (Cash).			Expenditure (Cash).			
	Premiums.	Interest and Dividends Earned.	Total Cash Income.	Net Losses Incurred.	General Expenditure.	Total Cash Expenditure.	Excess of Income over Expenditure.
	$	$	$	$	$	$	$
Abeille	99,996	461	100,457	34,923	42,223	77,145	23,312
Ætna Casualty	–	4,079	4,079	–	–	–	4,079
American and Foreign	14,646	–	14,646	5,151	4,622	9,773	4,873
American Surety	51,281	5,452	56,733	−11,334	20,927	9,593	47,140
British and Foreign	982	4,680	5,662	–	458	458	5,204
Continental Casualty	537,157	11,641	549,531	242,586	269,512	512,099	37,432
Co-operative Casualty	–	–	–	–	190	190	– 190
Excess	76,166	–	76,166	29,361	31,078	60,439	15,727
Federal	47,593	45	47,638	21,122	23,030	44,152	3,486
Fidelity and Casualty	220,592	15,881	236,474	138,928	126,964	265,892	−29,418
Hartford Accident	102,904	10,064	112,967	24,806	49,233	74,039	38,928
Hartford Live Stock	33,437	2,181	35,618	22,835	20,892	43,727	– 8,109
Hartford Steam Boiler	1,200	1,350	2,550	–	–	–	2,550
Indemnity Insurance Co.	30,282	2,500	32,782	3,578	9,987	13,565	19,217
International Fidelity	7,087	–	7,088	3,229	702	3,931	3,157
Lloyds Plate Glass	47,925	3,388	51,313	12,682	23,647	36,329	14,984
Loyal Protective	252,298	4,869	257,167	150,290	109,154	259,444	– 2,277
Lumbermen's Mutual Casualty	19,987	1,567	21,554	2,592	3,313	5,905	15,649
Maryland Casualty	279,079	23,933	303,012	132,986	124,046	257,032	45,980
Metropolitan Life	7,050	1,281	8,331	225	2,464	2,689	5,642
National Surety	175,842	15,162	191,004	116,689	90,585	207,274	−16,270
New York Plate Glass	21,024	1,524	22,548	6,399	10,676	17,075	5,473
Ocean Marine	–	–	–	–	–	–	–
Preferred Accident	39,801	1,613	41,414	24,403	25,508	49,910	– 8,496
Ridgely Protective	76,550	2,539	79,088	42,138	19,728	61,866	17,222
Royal Indemnity	163,796	13,385	177,181	117,486	89,591	207,077	−29,896
Travelers Indemnity	536,363	27,960	564,335	113,662	226,795	340,457	223,878
Travelers Insurance	543,806	–	543,969	185,015	376,063	561,078	−17,109
United States Fidelity and Guaranty	657,548	36,350	693,898	203,207	344,830	548,037	145,861
Western Casualty	36,138	–	36,138	11,182	27,028	38,210	– 2,072
Totals	**4,080,530**	**191,905**	**4,273,343**	**1,634,139**	**2,073,246**	**3,707,386**	**565,957**

89.—Dominion and Provincial Insurance in Canada, other than Fire and Life, 1922.

NET PREMIUMS RECEIVED.

Class of business.	Dominion Licensees.	Provincial Licensees.			Grand Totals.
		(a) Prov. Cos. within provinces by which they are incorp.	(b) Prov. Cos. within prov. other than those by which they are incorp.	Total Provincial Licensees.	
	$	$	$	$	$
Accident	2,425,201	1,708	–	1,708	2,426,909
Accident and Sickness combined	1,282,269	13,974	58,576	72,550	1,354,819
Accident and Sickness (Fraternals)	–	31,073	13,781	44,854	44,854
Automobile (including Fire risk)	2,481,802	99,740	95,126	194,866	2,676,668
Automobile (excluding Fire risk)	3,634,338	–	–	–	3,634,338
Burglary	726,076	1,678	–	1,678	727,754
Electrical Machinery	70,281	–	–	–	70,281
Explosion	64,284	–	–	–	64,284
Forgery	18,719	–	–	–	18,719
Funeral	–	65,948	–	65,948	65,948
Funeral (Fraternals)	–	26,887	–	26,887	26,887
Guarantee (Fidelity)	738,725	24,563	4,562	29,125	1,497,622
Guarantee (Surety)	729,972				
Hail	4,402,427	178,288	172,059	350,347	4,752,974
Inland Transportation	280,764	–	–	–	280,764
Liability	2,334,690	21,188	–	21,188	2,355,878
Live Stock	87,934	–	–	–	87,934
Plate Glass	708,748	133,163	3,671	136,834	845,582
Rain	29,348	–	–	–	29,348
Robbery	18,572	–	–	–	18,572
Sickness	1,584,872	–	–	–	1,584,872
Sickness (Fraternals)	–	166,418	188,065	354,483	354,483
Sickness and Funerals (Fraternals combined)	–	626,789	83,171	709,960	709,960
Sprinkler	92,826	–	–	–	92,826
Steam Boiler	300,126	–	–	–	300,126
Title	–	–	–	–	–
Tornado	153,787	–	–	–	153,787
Weather	–	237,542	–	237,542	237,542
Totals	**22,165,761**	**1,628,959**	**619,011**	**2,247,970**	**24,413,731**

NET LOSSES PAID.

	$	$	$	$	$
Accident	1,029,827	705	–	705	1,030,532
Accident and Sickness combined	652,259	5,980	35,508	41,488	693,747
Accident and Sickness (Fraternals)	–	20,089	12,706	32,795	32,795
Automobile (including Fire risk)	1,418,667	15,937	53,537	69,474	1,488,141
Automobile (excluding Fire risk)	1,332,511	–	–	–	1,332,511
Burglary	340,214	–	–	–	340,214
Electrical Machinery	25,819	–	–	–	25,819
Explosion	–	–	–	–	–
Forgery	5,572	–	–	–	5,572
Funeral	–	14,309	–	14,309	14,309
Funeral (Fraternals)	–	51,604	–	51,604	51,604
Guarantee (Fidelity)	332,545	4,437	2,106	6,543	550,414
Guarantee (Surety)	211,326				
Hail	1,635,347	124,807	33,156	157,963	1,793,310
Inland Transportation	59,769	–	–	–	59,769
Liability	1,119,546	9,952	–	9,952	1,129,498
Live Stock	60,015	–	–	–	60,015
Plate Glass	215,584	50,480	1,226	51,706	267,290
Rain	21,187	–	–	–	21,187
Robbery	–	–	–	–	–
Sickness	973,403	–	–	–	973,403
Sickness (Fraternals)	–	520,415	199,668	720,083	720,083
Sickness and Funerals (Fraternals combined)	–	–	44,459	44,459	44,459
Sprinkler	39,293	–	–	–	39,293
Steam Boiler	10,849	–	–	–	10,849
Title	–	–	–	–	–
Tornado	38,058	–	–	–	38,058
Weather	–	31,858	–	31,858	31,858
Totals	**9,521,791**	**850,573**	**382,366**	**1,232,939**	**10,754,730**

90.—Dominion and Provincial Insurance in Canada, other than Fire and Life, 1921 and 1922.

Business transacted by	Net premiums written.	Net losses incurred.
	$	$
1921.		
1. Dominion licensees	22,709,816	14,154,747
2. Provincial licensees—		
(a) Provincial companies within provinces by which they are incorporated	3,176,608	1,864,418
(b) Provincial companies within provinces other than those by which they are incorporated	669,542	524,130
Total for Provincial Companies	3,846,150	2,388,548
Grand Totals	**26,555,966**	**16,543,295**
1922.		
1. Dominion licensees	22,165,761	9,521,791
2. Provincial licensees—		
(a) Provincial companies within provinces by which they are incorporated	1,628,959	850,573
(b) Provincial companies within provinces other than those by which they are incorporated	619,011	382,366
Total for Provincial Companies	2,247,970	1,232,939
Grand Totals	**24,413,731**	**10,754,730**

4.—Government Annuities.

During the early years of the 20th century, there took place throughout the civilized world a distinct movement in favour of ameliorating the living conditions of the less well off members of society. One form which this movement took in the United Kingdom was that of old age pensions granted by the State as a free gift to its poorer citizens, whose earnings were very generally insufficient to permit of a margin of saving. In Canada, where wages were higher and a margin of saving consequently existed, the movement took the form of providing, through the establishment of Government annuities, an absolutely safe investment for such savings, which had only too often been lost through the inexperience of their owners, leaving the latter a burden upon the charity of relatives or of the public.

Under the Government Annuities Act, 1908 (7-8 Edw. VII, c. 5), as amended by the Act of 1920, His Majesty the King, represented by the Minister (at present the Minister of Labour), may sell to persons over the age of five years, domiciled or resident in Canada, immediate or deferred annuities of not less than $50 nor more than $5,000 (1) for the life of the annuitant; (2) for a term of years certain, not exceeding twenty years, or for the life of the annuitant, whichever period shall be the longer; and (3) an immediate or deferred annuity to any two persons domiciled in Canada during their joint lives, and with or without continuation to the survivor. The property and interest of any annuitant in any contract for an annuity is neither transferable nor attachable. The purchaser may contract that, in the event of the death of the annuitant before the date fixed for the annuity to begin, all money paid shall be refunded to the purchaser or his legal representatives with interest at the rate of 4 p.c. compounded yearly.

Statistics of the annuities in force on March 31, 1922 and 1923, are given in Tables **91** and **92.** From September 1, 1908, to March 31, 1923, 5,137 annuities had been issued. On March 31, 1923, 1,365 immediate annuities and 3,772 deferred annuities were in force. The total value of these annuities on that date was $5,892,604, and the amount of annuities purchased was $1,364,059.

91.—Government Annuities Fund Statement, March 31, 1922 and 1923.

Items.	Years ended March 31.	
	1922.	1923.
ASSETS.	$	$
Fund at beginning of year	4,366,633	5,005,424
Receipts during the year, less payments	638,791	887,180
Fund at end of year	5,005,424	5,892,604
LIABILITIES.		
Net present value of all outstanding contracts	5,005,424	5,892,604
RECEIPTS.		
For Immediate Annuities	514,923	807,390
For Deferred Annuities	235,017	221,337
Interest on Fund	178,850	208,684
Amount transferred by Government to maintain reserve	58,529	49,655
Total Receipts	**987,319**	**1,287,066**
PAYMENTS.		
Annuities paid under Immediate Contracts	319,202	386,527
Return of Premiums with Interest	27,546	12,985
Return of Premiums without Interest	1,780	374
Balance at end of year	638,791	887,180
Total Payments	**987,319**	**1,287,066**

92.—Valuation on March 31, 1922 and 1923, of Annuity Contracts issued pursuant to the Government Annuities Act, 1908.

Description of Contracts.	1922.			1923.		
	Number.	Amount of Annuities.	Total value on Mar. 31, 1922, of Annuities Purchased.	Number.	Amount of Annuities.	Total value on Mar. 31, 1923, of Annuities Purchased.
		$	$		$	$
1—Immediate Annuities	741	239,854	1,880,783	862	298,586	2,333,840
2—Guaranteed Annuities	313	72,258	634,085	357	79,359	705,905
3—Last Survivor Annuities	122	42,487	405,037	146	58,322	581,589
4—Def. "A" Annuities	1,150	248,620	619,726	1,171	260,601	664,271
5—Def. "A" Guaranteed Annuities	1,983	448,695	834,205	2,019	467,228	929,532
6—Def. "A" Last Survivor Annuities	58	25,215	84,667	64	29,173	110,635
7—Def. "B" Last Survivor Annuities	23	9,306	43,750	27	12,584	45,645
8—Def. "B" Annuities	470	148,181	503,171	491	158,206	521,187
Totals	**4,860**	**1,234,616**	**5,005,424**	**5,137**	**1,364,059**	**5,892,604**

IV.—COMMERCIAL FAILURES.

Commercial Failures in Canada, 1922.—According to Bradstreet's of January 6, 1923, the total number of Canadian failures reported during the calendar y ar 1922 was 3,185, with liabilities of $55,047,342, as against 2,350, with liabilities of $48,553,757 in 1921. In number there was an increase in 1922 of 35·5 p.c. as compared with 1921, while the liabilities increased by over 13·2 p.c. Dun's Review of January 13, 1923, gives the total number of Canadian insolvencies in 1922 as 3,695, as compared with 2,451 in 1921, whilst liabilities reached in 1922 the total of $78,068,959, as compared with $73,299,111 in 1921. Tables 93 to 98 give statistics from both authorities, those from Bradstreet's (in Table 93) being classified by provinces for the calendar years 1921 and 1922, and those from Dun's Review by branches of business for the calendar years 1920 to 1922 (Table 94), and by classes

and provinces for the calendar year 1922, with totals for the years 1909 to 1921 in Table 95. An analysis by causes of failures for 1921 and 1922 is given in Table 96 (Bradstreet's).

93.—Commercial Failures in Canada, by Provinces, and in Newfoundland for the calendar years 1921 and 1922. [From Bradstreet's.]

Provinces.	Number of Failures.		Assets.		Liabilities.	
	1921.	1922.	1921.	1922.	1921.	1922.
			$	$	$	$
Prince Edward Island	8	12	20,805	75,056	35,955	175,222
Nova Scotia	97	114	1,282,963	1,332,128	2,432,937	1,980,271
New Brunswick	50	66	410,847	537,302	918,202	926,954
Quebec	893	1,255	9,071,294	9,370,023	19,577,821	24,263,215
Ontario	569	759	5,082,032	5,476,319	11,447,743	12,879,192
Manitoba	245	369	1,469,955	1,617,905	4,111,813	4,583,747
Saskatchewan	210	231	1,565,088	1,834,823	2,393,003	2,939,064
Alberta	132	194	1,499,660	2,376,864	2,343,915	3,706,796
British Columbia	146	185	1,086,592	1,312,716	5,292,368	3,592,881
Canada	**2,350**	**3,185**	**21,489,236**	**23,933,136**	**48,553,757**	**55,047,342**
Newfoundland	45	64	1,919,005	1,315,133	2,510,322	2,200,004

94.—Commercial Failures in Canada by Branches of Business, 1920-1922.
[From Dun's Review.]

Classes.	1920.		1921.		1922.	
	Number.	Liabilities.	Number.	Liabilities.	Number.	Liabilities.
		$		$		$
Manufacturers—						
Iron and Foundries	3	115,011	11	1,264,578	17	873,211
Machinery and Tools	20	4,046,847	28	7,138,818	60	10,430,493
Woollens, Carpets, etc	–	–	7	124,104	4	23,648
Cotton, Hosiery, etc	–	–	3	926,743	7	101,467
Lumber, Carpenters	26	1,034,253	85	2,041,646	134	4,860,837
Clothing, Millinery	52	3,096,484	127	6,429,289	148	3,614,203
Hats, Gloves and Furs	10	170,834	21	705,049	26	1,592,206
Chemicals and Drugs	2	19,000	9	166,409	7	48,155
Paints and Oils	–	–	2	38 204	2	54,522
Printing and Engraving	7	499,900	14	113,154	30	329,816
Milling and Bakers	22	1,180,602	47	1,710,511	54	763,253
Leather, Shoes, etc	9	287,116	17	811,232	30	7,586,389
Liquors and Tobacco	5	294,000	12	467,514	19	386,885
Glass, Earthenware	2	9,658	4	93,800	7	319,302
All other	96	5,117,511	172	11,945,739	312	8,096,404
Total Manufacturers	**255**	**15,871,216**	**559**	**33,976,790**	**857**	**39,080,791**
Traders—						
General Stores	171	2,997,633	426	7,815,984	488	6,408,569
Groceries and Meats	259	1,634,916	427	4,093,626	582	3,970,646
Hotels, Restaurants	49	138,497	66	819,457	146	1,117,053
Liquors and Tobacco	13	34,812	33	813,884	38	184,547
Clothing, Furnishing	60	703,548	179	2,021,322	333	4,614,129
Dry Goods and Carpets	43	436,611	157	3,460,304	226	4,690,282
Shoes, Rubbers, and Trunks	31	279,912	84	1,589,683	138	3,401,415
Furniture, Crockery	8	77,311	18	217,875	49	660,731
Hardware, Stoves, and Tools	23	310,697	36	439,580	62	716,338
Chemicals and Drugs	7	32,500	18	143,417	46	315,130
Paints and Oils	–	–	5	64,067	8	154,422
Jewelry and Clocks	8	48,904	25	223,149	53	267,244
Books and Papers	4	12,100	24	181,726	26	135,496
Hats, Furs and Gloves	4	99,836	18	1,203,496	25	537,759
All other	91	897,228	223	6,798,999	497	5,830,442
Total Traders	**771**	**7,704,505**	**1,739**	**29,886,569**	**2,717**	**33,004,203**
Agents and Brokers	**52**	**2,918,580**	**153**	**9,435,752**	**121**	**5,983,965**
Total	**1,078**	**26,494,301**	**2,451**	**73,299,111**	**3,695**	**78,068,959**

95.—Commercial Failures in Canada, by Provinces and Classes, for 1922, with totals for 1909-1921. [From Dun's Review.]

Provinces.	Total Commercial.			Manufacturing.	
	Number.	Assets.	Liabilities.	Number.	Liabilities.
		$	$		$
Prince Edward Island	13	24,800	93,900	–	–
Nova Scotia	116	551,185	1,692,005	19	336,200
New Brunswick	82	530,939	787,837	13	245,275
Quebec	1,485	32,225,598	45,424,806	386	26,524,786
Ontario	954	18,362,054	16,494,181	282	9,643,475
Manitoba	373	4,054,383	4,449,628	60	755,986
Saskatchewan	224	2,175,850	2,772,540	15	111,914
Alberta	221	2,550,991	2,392,662	30	362,008
British Columbia	162	1,948,714	2,207,115	47	916,647
Total 1922	**3,630**	**62,424,514**	**76,314,674**	**852**	**38,896,291**
Newfoundland	65	673,275	1,754,285	5	184,500
Total 1921	2,451	57,158,397	73,299,111	559	33,976,790
" 1920	1,078	18,569,516	26,494,301	255	15,871,216
" 1919	755	10,741,441	16,256,259	213	10,234,477
" 1918	873	11,251,341	14,502,477	232	8,248,807
" 1917	1,097	13,051,900	18,241,465	261	7,455,094
" 1916	1,685	19,670,542	25,069,534	363	8,796,646
" 1915	2,661	39,526,358	41,162,321	655	13,877,414
" 1914	2,898	30,909,563	35,045,095	614	11,063,191
" 1913	1,719	12,658,979	16,979,406	452	6,792,763
" 1912	1,357	8,783,409	12,316,936	323	4,556,615
" 1911	1,332	9,964,604	13,491,196	321	4,760,016
" 1910	1,262	11,013,396	14,514,650	292	7,030,227
" 1909	1,442	10,318,511	12,982,800	354	3,933,938

Provinces.	Trading.		Other Commercial.		Banking.	
	Number.	Liabilities.	Number.	Liabilities.	Number.	Liabilities.
		$		$		$
Prince Edward Island	13	93,900	–	–	–	–
Nova Scotia	95	1,353,805	2	2,000	–	–
New Brunswick	69	542,562	–	–	–	–
Quebec	1,047	13,929,845	52	4,970,175	2	27,480
Ontario	643	6,465,196	29	385,510	–	–
Manitoba	296	3,371,949	17	321,693	1	20,000
Saskatchewan	206	2,582,701	3	77,925	–	–
Alberta	188	2,004,154	3	26,500	–	–
British Columbia	106	1,197,506	9	92,962	1	175,000
Total 1922	**2,663**	**31,541,618**	**115**	**5,876,765**	**4**	**222,480**
Newfoundland	54	1,462,585	6	107,200	–	–
Total 1921	1,739	29,886,569	153	9,435,752	1	45,233
" 1920	771	7,704,505	52	2,918,580	–	–
" 1919	494	4,475,628	48	1,546,154	–	–
" 1918	590	5,142,397	51	1,111,273	–	–
" 1917	777	8,417,239	59	2,369,132	–	–
" 1916	1,237	12,290,368	85	3,982,520	–	–
" 1915	1,888	21,696,890	118	5,558,017	1	150,000
" 1914	2,164	18,677,935	120	5,303,968	1	250,000
" 1913	1,216	8,681,419	51	1,505,224	1	125,000
" 1912	975	6,906,665	59	853,656	–	–
" 1911	986	7,606,891	5	1,124,289	1	71,194
" 1910	947	6,943,579	23	540,850	2	2,546,871
" 1909	1,059	7,867,287	29	1,181,575	–	–

NOTE.—Newfoundland included in totals, 1909-1921.

96.—Causes of Failures in Canada and the United States by Numbers and Percentages, years ended December 31, 1921 and 1922. [From Bradstreet's.]

In Canada (including Newfoundland and St. Pierre-Miquelon).

Failures due to	Number.		Assets.		Liabilities.	
	1921.	1922.	1921.	1922.	1921.	1922.
	No.	No.	$	$	$	$
Incompetence	555	768	3,181,669	3,251,707	7,559,015	7,466,371
Inexperience	97	113	438,569	449,321	863,860	1,075,100
Lack of capital	814	1,229	10,233,610	11,306,790	23,134,379	26,196,599
Unwise credits	42	32	281,115	308,853	678,738	937,534
Failures of others	33	24	834,046	204,119	1,635,091	553,567
Extravagance	8	8	34,614	186,120	66,575	321,545
Neglect	40	56	148,158	193,926	321,704	436,886
Competition	9	22	103,157	194,700	196,356	664,753
Specific conditions	613	800	7,017,587	7,802,399	12,737,007	13,704,274
Speculation	18	26	402,580	350,183	1,231,708	1,034,008
Fraud	166	169	733,136	1,113,976	2,639,646	3,989,250
Total	**2,395**	**3,247**	**23,408,241**	**25,362,094**	**51,064,079**	**56,379,887**
In United States.						
Incompetence	6,404	7,666	103,548,671	72,631,096	167,975,466	140,241,850
Inexperience	1,142	1,062	11,391,871	6,808,250	21,851,478	12,244,659
Lack of capital	5,855	6,912	77,166,433	80,848,584	165,526,601	158,575,479
Unwise credits	230	292	22,938,682	5,791,966	29,329,791	9,570,876
Failures of others	226	278	8,183,145	7,856,990	13,957,791	16,139,150
Extravagance	82	148	1,138,640	1,589,500	2,388,411	3,526,794
Neglect	257	236	1,379,815	4,376,378	3,014,239	6,562,221
Competition	183	250	1,171,511	5,354,535	2,082,472	8,092,894
Specific conditions	4,638	4,686	205,056,079	157,311,140	317,863,633	241,071,706
Speculation	66	55	5,413,682	6,362,127	8,593,432	11,636,992
Fraud	931	830	9,210,059	16,687,688	23,184,371	42,185,759
Total	**20,014**	**22,415**	**445,598,588**	**365,618,254**	**755,777,685**	**649,848,380**

Percentages of Number of Failures and Liabilities, Classified by Cause.

Failures due to	Canada per cent.				United States per cent.			
	Number.		Liabilities.		Number.		Liabilities.	
	1921.	1922.	1921.	1922.	1921.	1922.	1921.	1922.
Incompetence	23·2	23·6	14·8	13·2	32·0	34·2	22·2	21·6
Inexperience	4·0	3·5	1·7	1·9	5·7	4·7	2·9	1·9
Lack of capital	34·0	37·8	45·3	46·5	29·3	30·8	21·9	24·4
Unwise credits	1·8	1·0	1·3	1·6	1·1	1·3	3·9	1·5
Failures of others	1·4	0·8	3·2	1·0	1·1	1·2	1·8	2·5
Extravagance	0·3	0·3	0·1	0·6	0·4	0·7	0·3	0·6
Neglect	1·7	1·7	0·6	0·8	1·3	1·1	0·4	1·0
Competition	0·4	0·7	0·4	1·2	0·9	1·1	0·3	1·2
Specific conditions	25·6	24·6	25·0	24·3	23·2	20·9	42·1	37·0
Speculation	0·7	0·8	2·4	1·8	0·3	0·3	1·1	1·8
Fraud	6·9	5·2	5·2	7·1	4·7	3·7	3·1	6·5

Analysis of Commercial Failures.—In Tables 97 and 98 Bradstreet's and Dun's records of commercial failures are analyzed by Kemmerer's method. First, the total of concerns failing is stated as a percentage of those in business, and this percentage is then stated as an index number, with 1900 as a base year. Then the assets and liabilities are stated, with the average liabilities per failure, since failures are more disastrous in proportion as the liabilities are larger. Next, the average liabilities per failure are stated as an index number, with 1900 as the base year. The percentage of liabilities to assets is also given, and finally the index number indicating the proportion of failures to the number of concerns in business and the index number indicating the size of the liabilities are averaged, and the result is given as the barometer of business depression. This number reversed, *i.e.*, subtracted from 200, is given as a barometer of business confidence. The records of Bradstreet and Dun are not on the same basis, but the general tendency of the two records is the same.

97.—Commercial Failures and Business Confidence in Canada, 1900-1922. [Bradstreet's]

Years.	Number of Concerns.				Assets.	Liabilities.				Index Number of Business.	
	Doing Business.	Failing.	Proportion Failing.			Total.	Average.		Percentage of liabilities to assets.	Depression.	Confidence.
			Percentage.	Index No. (1900=100.)			Amount.	Index No. (1900=100)			
	No.	No.	p.c.		$	$	$		p.c.		
1900	100,618	1,337	1·32	100·0	4,246,693	10,785,601	8,067	100·0	254	100·0	100·0
1901	103,421	1,379	1·33	100·7	5,264,551	11,783,737	8,545	105·9	224	103·3	96·8
1902	106,009	1,095	1·03	78·0	3,602,542	8,546,365	7·805	96·7	237	87·3	112·7
1903	108,215	958	0·88	66·6	3,870,605	8,372,011	8,739	108·3	216	87·4	112·6
1904	110,615	1,175	1·06	80·3	4,137,418	10,019,311	8,527	105·7	242	93·0	107·0
1905	114,335	1,430	1·25	94·7	6,584,191	13,879,700	9,706	120·3	211	107·5	92·5
1906	112,362	1,239	1·10	83·3	4,305,076	9,450,093	7,627	94·5	219	88·9	111·1
1907	116,202	1,365	1·17	86·6	5,276,698	11,735,272	8,597	106·6	222	96·6	103·4
1908	118,875	1,715	1·44	109·1	7,770,207	17,582,304	10,252	127·1	226	118·1	81·9
1909	123,232	1,588	1·28	96·9	6,195,515	12,811,184	8,067	100·0	207	98·4	101·6
1910	128,881	1,469	1·14	86·3	7,075,347	15,712,586	10,696	132·6	222	109·4	90·6
1911	130,446	1,401	1·07	81·0	6,420,331	13,086,946	9,341	115·8	204	98·4	101·6
1912	142,583	1,312	0·92	69·7	5,611,675	12,355,282	9,417	116·7	220	93·2	106·8
1913	149,852	1,827	1·21	91·6	8,140,990	16,650,450	9,113	112·9	204	102·2	97·8
1914	155,849	2,886	1·85	140·1	13,507,536	30,693,658	10,635	131·8	227	135·9	64·1
1915	156,008	2,621	1·68	127·3	14,227,192	32,134,312	12,260	152·0	226	139·6	60·4
1916	156,535	1,772	1·13	85·6	6,349,078	15,952,684	9,003	111·6	251	98·6	101·4
1917	153,079	1,109	0·72	54·5	6,207,512	13,616,822	12,278	152·2	219	103·3	96·7
1918	152,974	814	0·53	40·1	5,354,727	12,413,536	15,250	189·0	232	114·5	85·5
1919	156,187	625	0·40	30·3	5,089,534	10,095,232	16,152	200·2	198	115·2	84·8
1920	164,049	966	0·59	44·7	10,478,465	20,808,053	21,540	267·0	199	155·8	44·2
1921	171,415	2,350	1·37	103·8	21,489,236	48,553,757	20,637	255·8	226	179·8	20·2
1922	173,080	3,185	1·84	139·4	23,933,136	55,047,342	17,283	214·2	230	176·8	23·2

NOTE.—Newfoundland included 1900–1913 inclusive.

98.—Commercial Failures and Business Confidence in Canada, 1900-1922. [Dun.]

Years.	Number of Concerns.				Assets.	Liabilities.				Index Number of Business.	
	Doing Business.	Failing.	Proportion Failing.			Total.	Average.		Percentage of liabilities to assets.	Depression.	Confidence.
			Percentage.	Index No. (1900=100.)			Amount.	Index No. (1900=100.)			
	No.	No.	p.c.		$	$	$		p.c.		
1900	95,772	1,355	1·41	100·0	8,202,898	11,613,208	8,570	100·0	142	100·0	100·0
1901	96,961	1,341	1·38	97·8	7,686,823	10,811,671	8,062	94·1	141	95·9	104·1
1902	93,890	1,101	1·17	82·9	7,772,418	10,934,777	9,931	115·9	141	99·4	100·6
1903	95,029	978	1·03	73·0	4,872,422	7,552,724	7,723	90·1	155	81·5	118·5
1904	96,822	1,246	1·29	91·5	8,555,875	11,394,117	9,145	106·7	133	99·1	100·9
1905	101,246	1,347	1·33	94·3	6,822,005	9,854,659	7,316	85·4	144	89·8	110·2
1906	104,576	1,184	1·13	80·1	6,499,052	9,085,773	7,673	89·5	140	84·8	115·2
1907	108,160	1,278	1·18	83·7	9,443,227	13,221,250	10,345	120·7	140	102·2	97·8
1908	113,551	1,640	1·44	102·1	12,008,113	14,931,790	9,105	106·2	124	104·2	95·8
1909	117,309	1,442	1·23	87·2	10,318,511	12,982,800	9,003	105·0	126	96·1	103·9
1910	110,764	1,262	1·05	74·4	11,013,396	14,514,650	11,501	134·2	132	104·3	95·7
1911	129,917	1,332	1·03	73·0	9,964,404	13,491,196	10,128	118·2	135	95·6	104·4
1912	132,469	1,357	1·02	72·3	8,783,409	12,316,396	9,076	105·9	140	89·1	110·9
1913	141,135	1,719	1·22	86·5	12,658,979	16,979,406	9·877	115·2	134	100·8	99·2
1914	149,999	2,892	1·93	136·9	30,888,363	34,996,694	12,101	141·2	113	139·0	61·0
1915	150,378	2,652	1·76	124·8	39,243,658	40,676,621	15,338	179·0	104	151·9	48·1
1916	147,575	1,677	1·14	80·8	19,640,703	24,985,908	14,899	173·9	127	127·3	72·7
1917	142,431	1,088	0·76	53·9	12,994,179	18,108,347	16,643	194·2	139	124·0	76·0
1918	141,709	873	0·62	43·9	11,246,341	14,502,477	16,612	193·8	129	118·8	81·2
1919	142,919	751	0·53	37·6	10,731,541	16,224,259	21,603	252·1	151	144·8	55·2
1920	151,203	1,034	0·68	48·2	17,501,332	24,719,111	23,906	278·9	141	163·5	36·5
1921	154,608	2,379	1·54	109·2	55,114,487	68,947,140	28,982	338·2	125	223·7	−23·7
1922	166,435	3,630	2·18	154·6	62,424,514	76,314,674	21,023	245·3	122	199·9	0·1

NOTE.—Newfoundland included 1900–1913 inclusive.

Under the Bankruptcy Act of 1919 (9-10 George V, c. 36) which went into force on July 1, 1920, certain documents relative to all failures coming under the Act are forwarded to the Dominion Statistician. Statistics based upon these documents have been duly compiled in the Dominion Bureau of Statistics, and are published in Table 99. In the consolidation of these statistics it should be remembered that recent changes in the Act going into force October 1, 1923, may affect the comparability of the figures. It may, however, be pointed out that since the early months of 1923 there has been a decided decrease in the number of failures.

99.—Assignments under the Bankruptcy Act, by Months, 1920-1923.

Months.	1920.[1]	1921.	1922.	1923.[2]
January	–	228	374	387
February	–	170	340	355
March	–	171	340	368
April	–	132	245	324
May	–	155	309	291
June	–	156	288	271
July	49	169	300	209
August	73	186	272	242
September	68	214	332	320
October	97	228	364	200
November	117	267	410	259
December	169	288	351	232
Totals	**573**[1]	**2,364**	**3,925**	**3,458**

[1]Six months. [2]Subject to revision.

By provinces, the failures in 1921, 1922 and 1923 have been in order as follows, the figures for 1923 being provisional:—Prince Edward Island, 11, 15, 16; Nova Scotia, 108, 121, 156; New Brunswick, 56, 131, 67; Quebec, 928, 1,589, 1,236; Ontario, 650, 1,058, 970; Manitoba, 147, 284, 252; Saskatchewan, 177, 272, 280; Alberta, 189, 299, 323; British Columbia, 98, 156, 158.

XII.—EDUCATION.

I.—GENERAL EDUCATION.

Throughout the Dominion of Canada public education is a matter of provincial concern. Before Confederation, the maritime colonies were separated from Ontario by French-speaking Quebec, and in each of these an educational system specially adapted to the local conditions had come into existence. When Confederation was under consideration, the protection of existing vested rights was the predominant consideration. As a result, section 93 of the British North America Act, which embodies the Canadian Constitution in so far as that Constitution is a written one, provides that in and for each province the legislature may exclusively make laws in respect of education, except that "nothing in any such law shall prejudicially affect any right or privilege with respect to denominational schools which any class of persons have by law in the province at the union."

Inasmuch as the administration of public education is one of the chief functions of Provincial Governments, there is in each of the provinces, except Quebec, a Department of Education administered either by a member of the Provincial Executive Council or by the Executive Council as a whole. In practice, however, the routine administration is in the hands of the permanent officials of the Department of Education, who are members of the permanent civil service. In Quebec, the Superintendent of Public Instruction, appointed by the Government, is *ex officio* President of the Council of Public Instruction; the link between the Department of Public Instruction and the Government is the Provincial Secretary; there are also two Deputy Heads, called the French and English secretaries of the department.

Since the Departments of Education are permanent authorities, controlled as to the details of administration by permanent officials, educational policy is relatively permanent; further, the control of the Government over education throughout the province is relatively stronger than in the United States. A capable Deputy Minister or Superintendent of Education impresses his personality and his views upon the whole system of his province, especially as in practice he controls the payment of government grants, which constitute an important part of the revenues applied to educational purposes. (In 1922, out of a total expenditure on public general education in Canada amounting to $107,685,069, $13,934,113 came from the Provincial Governments.)

The Department of Education in each province naturally has its headquarters at the capital of the province. Its local representatives are the school inspectors, who, in all provinces except Ontario, are appointed and paid by the Government; in Ontario high and separate school inspectors are appointed and paid by the Government, while public school inspectors, except in the unorganized districts, are appointed by the county or city municipality from among the persons recognized by the Department of Education as qualified for such appointment, and after appointment receive half their salary from the municipality and half from the province.

Education in Quebec.—In Quebec there are two distinct systems of education, in each of which the teaching of religion takes a prominent position—the Protestant and the Roman Catholic systems. In the former, which is under the control of

the Protestant Committee of the Council of Public Instruction, with an English Secretary, the curriculum and the general system of education is similar to that in the other provinces, except that the highest grade is Grade XI, from which students are matriculated to McGill University and Bishop's College, the two Protestant English-speaking universities of the province.

In the Roman Catholic schools, which are mainly French-speaking as the Protestant schools are English-speaking, the administration is in the hands of the Catholic Committee of the Council of Public Instruction, with a French Secretary. General elementary training is given by means of a curriculum, extending over eight " years ", some of which require more than a year to complete, the work of the eighth " year " corresponding in a general way to the work of Grade X as that work is generally understood.

Recent Developments in Education—In recent years there has been a tendency to lengthen the period of compulsory attendance and to enforce the law. This tendency has been most marked in Ontario, where in 1919 an Act was passed providing (1) that children 8 to 14 must attend full time and that children from 5 to 8, once enrolled, must attend full time to the end of the school term for which they are enrolled; (2) that adolescents from 14 to 16 who have not attained university matriculation standing must attend full time; those exempted owing to circumstances requiring them to go to work must attend part time *during the ordinary working day* for 400 hours a year in municipalities providing part time courses, which all municipalities of 5,000 population and upwards *must* do from September, 1922, smaller municipalities having an option in the matter. Further, those who have not attended full time up to 16 are required, after September, 1923, to attend 320 hours a year of part time courses up to age 18. In other words, an Ontario adolescent has the alternative of full time attendance to 16 or full time attendance to 14 plus part time attendance to 18. The operation of this Act has greatly increased the attendance in Ontario secondary schools.

Further, as a result of the keeping of children in school to a more advanced age, increasing attention has naturally been devoted to technical education of various kinds, especially as required by those students who are not adapted to higher intellectual work. The number taking technical training of some kind or other is rapidly increasing.

Statistics of General Education—The statistical tables on education in Canada commence with a statistical summary (Table **1**), which shows that in the academic year ended in 1922 there were 2,123,618 pupils in attendance at educational institutions in Canada, or 24·2 p.c. of the 1921 population. Of the above, 1,860,760, or 21·2 p.c. of the total population, were enrolled in ordinary day schools under public control, the average daily attendance numbering 1,377,423. Those attending vocational schools—agricultural, commercial, industrial and other technical schools—numbered 80,549. There were 23,929 students in private business colleges, and 71,504 in other private schools under college grade. University students in regular courses numbered 18,245 and college students in regular courses, 5,902. Students in classical colleges numbered 9,502.

There were in 1922, 59,312 teachers in schools under public control, 10,596 males and 48,716 females. The total expenditure on schools under public control was $107,685,069, of which governments contributed $13,934,113, and local taxation most of the balance.

1.—Statistical Summary of Education in Canada,

NUMBER OF PUPILS ATTENDING

No.	Type of Institution.	P.E.I. 1922.	N.S. 1922.	N.B. 1922.
1	Ordinary day schools under public control	18,323	114,229	77,774
2	Agricultural, commercial, industrial and other technical schools, including all evening schools, but not short courses in universities and colleges	166	7,086	1,390
3	Schools for teacher-training	341	1,090	358
4	Indian schools	38	276	278
5	Schools for the blind and deaf[1]	8	226	67
6	Business colleges (private)	75	698	723
7	Private, elementary and secondary schools	497	1,390	391
8	Preparatory courses at universities and colleges	135	372	322
9	Short, special and correspondence courses at universities and colleges	–	490	–
10	Classical colleges	–	–	–
11	Affiliated, professional and technical colleges (regular courses)	–	292	–
12	Universities (regular courses)	95	1,293	486
	Grand Total (exclusive of duplicates)	**19,678**	**127,442**	**81,789**
	Population of 1921	**88,615**	**523,837**	**387,876**

DISTRIBUTION AND ATTENDANCE OF PUPILS IN ORDINARY

13	Number of boys enrolled	9,273	57,028	35,431
14	Number of girls enrolled	9,050	57,201	35,915
15	Total in the first six grades	14,829	89,264	63,518
16	Total in intermediate and secondary grades	3,835	24,965	7,828
17	Total in secondary grade	–	11,039	–
18	Boys in secondary grade	–	4,202	–
19	Girls in secondary grade	–	6,837	–
20	Number of pupils in graded schools	6,570	72,091	36,366
21	Number of pupils in ungraded schools	11,753	42,138	34,980
22	Average daily attendance	12,338	70,410	51,590
23	Average number of days each pupil attended during year	129	136	145
24	Average number of days schools were open during year	192	196	190
25	Percentage of total attendance in average attendance	67·4	69·5	72·3

TEACHERS, ACCOMMODATION AND EXPENDITURE

26	Teachers in schools under public control	611	3,208	2,246
27	Male teachers	122	263	180
28	emale teachers	489	2,945	2,066
29	Number of school districts	473	1,773	1,331
30	Number of school houses	473	1,863	–
31	Number of class-rooms in operation	609	2,982	2,061
32	Number of ungraded one-roomed schools	415	1,431	1,196
33	Average number of pupils to a class-room	30	38	38
34	Total expenditure on education $	428,869	3,646,570	2,657,046
35	Total expenditure on education by Governments $	271,103	616,389	381,075
36	Total expenditure on education by ratepayers, etc $	157,766	3,030,181	2,275,971
37	Expenditure on teachers' salaries $	–	1,740,731	–
38	Average annual cost per pupil enrolled $	22·21	31·92	34·17
39	Average annual cost per pupil in daily attendance $	31·49	45·92	51·50

[1] The blind and deaf of Prince Edward Island and New Brunswick are accommodated at the insitu- are accommodated at the Institution for the Blind in Brantford, Ont., by arrangement between the and Alberta are accommodated at the School for the Deaf in Winnipeg, Man.

[2] Figures of 1920-21 in Quebec; calendar year 1921 for public and separate schools, and school year except university regular courses, private schools and certain other figures of Quebec, which are for 1920-21.

[3] Included with items 7 and 10. There were, however, a number in preparatory courses, in addition to

[4] Including 309 in the Yukon and N.W.T.

by Provinces, 1922, or latest year reported.

EDUCATIONAL INSTITUTIONS.

Quebec[2] 1921-22.	Ontario[2] 1921-22.	Manitoba. 1922.	Sask. 1922.	Alberta. 1922.	B.C. 1922.	Total.	No.
462,779	632,123	136,876	183,935	142,902	91,919	1,860,760	1
11,046	44,450	5,802	1,779	3,202	5,628	80,549	2
1,376	2,431	790	1,462	760	685	9,293	3
1,539	3,625	1,804	1,444	1,203	2,505	13,021[4]	4
579	481	131	74	54	75	1,695	5
4,248	12,229	1,928	649	2,304	1,075	23,929	6
54,671	7,706	563	2,514	2,489	1,283	71,504	7
[3]	3,321	251	8	653	74	5,136	8
2,629	4,299	1,067	15,036	344	217	24,082	9
9,502	–	–	–	–	–	9,502	10
1,572	3,046	759	54	64	115	5,902	11
5,428	6,168	1,874	799	1,088	1,014	18,245	12
555,269	**719,879**	**151,845**	**207,754**	**155,063**	**104,590**	**2,123,618**	
2,361,199	**2,933,662**	**610,118**	**757,510**	**588,454**	**524,582**	**8,788,483**	

DAY SCHOOLS UNDER PUBLIC CONTROL.

248,544	318,350	–	93,644	72,093	46,833	–	13
264,107	313,773	–	90,291	70,809	45,086	–	14
465,945	465,904	111,377	153,389	112,508	64,801	1,541,535	15
51,405	166,219	25,499	30,546	30,394	27,118	367,809	16
–	54,870	10,729	10,714	10,762	8,944	–	17
–	21,924	–	4,419	4,707	3,929	–	18
–	26,861	–	6,295	6,055	5,015	–	19
–	450,000	82,000	85,000	76,691	80,328	–	20
–	182,000	54,000	98,000	66,211	11,581	–	21
397,172	446,396	95,433	119,041	100,515	75,528	1,377,423	22
–	–	130	127	131	–	–	23
–	–	187	189·3	179	–	–	24
77·47	70	69·7	64·7	70·3	82·2	71·6	25

IN SCHOOLS UNDER PUBLIC CONTROL.

17,201	16,147	3,893	7,225	5,787	2,994	59,312	26
2,631	2,378	924	1,970	1,428	700	10,506	27
14,570	13,769	2,969	5,255	4,359	2,294	48,716	28
7,377	–	2,094	4,543	3,297	716	–	29
7,543	7,231	1,936	–	2,861	991	–	30
13,274	–	3,782	5,717	4,485	2,823	51,000 (approx.)	31
–	4,989	–	3,506	2,588	473	–	32
38	–	37	32	32	33	–	33
22,122,979	36,739,564	10,898,340	13,442,417	9,915,706	7,833,578	107,685,069	34
2,351,471	3,475,713	1,058,292	1,491,610	1,146,722	3,141,738	13,934,113	35
19,771,508	33,263,851	9,840,048	11,950,807	8,768,984	4,691,840	93,750,956	36
–	19,036,129	5,016,903	7,273,200	5,213,011	–	–	37
43·15	54·31	79·62	73·08	61·24	85·23	53·77	38
55·70	82·30	114·23	112·95	87·09	103·73	76·10	39

tions in Halifax, N.S., by arrangement with that province; the blind of the three prairie provinces different prairie provinces and Ontario; by a similar arrangement with Manitoba, the deaf of Saskatchewan

1921-22 for secondary schools, in Ontario. All other figures for both Quebec and Ontario are for 1921-22,

those included in items 7 and 10, in private schools not reporting.

2.—Number of Schools, Teachers and Pupils in Canada, by Provinces, 1901, 1906, 1911, and 1916—1922 or latest year reported.

PRINCE EDWARD ISLAND (All publicly controlled schools, except Prince of Wales College, for year ended June 30).

Years.	Schools.	Teachers.			Pupils Enrolled.			Average Attendance of Pupils.	
		Male.	Female.	Total.	Boys.	Girls.	Total.	No.	Per cent.
1901	474	299	290	589	11,219	9,460	20,779	12,330	59·34
1906	478	246	327	573	10,196	8,790	18,986	11,903	62·69
1911	478	178	413	591	9,152	8,245	17,397	10,511	60·40
1916	476	138	457	595	9,565	8,797	18,362	11,347	61·79
1917	473	110	491	601	9,291	8,899	18,190	11,319	62·22
1918	468	100	497	597	9,101	8,760	17,861	11,334	63·50
1919	466	102	492	594	8,882	8,705	17,587	10,908	62·00
1920	454	91	486	577	8,842	8,512	17,354	10,991	62·86
1921	461	103	488	591	8,913	8,597	17,510	11,446	65·30
1922	473	122	489	611	9,273	9,050	18,323	12,338	67·40
NOVA SCOTIA (Elementary and secondary publicly controlled schools for the year ended July 31).									
1901	2,387	540	1,952	2,492	49,768	48,642	98,410	53,643	54·5
1906	2,446	366	2,212	2,578	50,198	50,134	100,332	59,165	58·9
1911	2,639	331	2,468	2,799	50,985	51,925	102,910	61,250	59·5
1916	2,837	246	2,773	3,019	53,944	55,245	109,189	69,227	63·4
1917	2,856	198	2,847	3,045	53,560	55,472	109,032	70,118	64·3
1918	2,859	185	2,852	3,037	52,731	55,361	108,094	67,923	62·8
1919	2,812	163	2,849	3,012	52,491	54,491	106,982	65,906	61·6
1920	2,835	199	2,816	3,015	53,179	54,917	108,096	66,442	61·6
1921	2,898	203	2,886	3,089	54,355	55,128	109,483	73,291	66·9
1922	2,982	263	2,945	3,208	57,028	57,201	114,229	79,410	69·5
NEW BRUNSWICK (Elementary and secondary publicly controlled schools for second term ended June 30).									
1901	1,741	353	1,488	1,841	30,870	29,550	60,420	37,717	58·34
1906	1,762	302	1,577	1,879	30,913	29,768	60,681	37,540	61·86
1911	1,885	221	1,754	1,975	31,871	31,202	63,073	39,215	62·17
1916	1,996	196	1,965	2,161	33,089	33,459	66,548	43,914	65·98
1917	1,981	167	1,962	2,129	32,025	32,751	64,776	42,884	66·22
1918	1,986	149	1,973	2,122	31,858	32,990	64,848	44,970	69·41
1919	1,950	136	1,971	2,107	31,784	33,136	64,920	46,358	71·41
1920	1,898	141	1,913	2,054	32,015	33,035	65,050	45,860	70·49
1921	1,973	155	1,987	2,142	33,615	34,477	68,092	46,777	74·00
1922	2,061	180	2,066	2,246	35,431	35,915	71,346	51,590	72·30
QUEBEC (Elementary and Model Schools and Academies for year ended June 30).									
1901	5,970	1,268	8,924	10,192	153,801	161,080	314,881	232,255	73·76
1906	6,364	1,422	9,779	11,201	166,967	174,841	341,808	263,111	76·97
1911	6,799	1,786	11,104	12,890	189,116	200,007	389,123	301,678	77·52
1916	7,095	2,263	12,813	15,076	225,425	239,032	464,447	373,364	80·39
1917	7,195	2,265	13,373	15,638	223,362	240,028	463,390	367,468	79·29
1918	7,255	2,394	13,800	16,194	224,248	243,260	467,508	369,057	78·94
1919	7,366	2,473	13,740	16,213	233,834	252,367	486,201	365,803	75·23
1920	7,481	2,548	14,162	16,710	239,648	256,239	495,887	372,377	75·09
1921	7,543	2,631	14,570	17,201	248,544	264,107	512,651	397,172	77·47
1922	7,695	2,760	14,976	17,727	260,449	270,256	530,705	421,704	78·88

2.—Number of Schools, Teachers and Pupils in Canada, by Provinces, 1901, 1906, 1911, and 1916—1922 or latest year reported—con.

ONTARIO (Elementary and secondary publicly controlled schools for calendar years up to 1916, since which date the secondary school year has ended on June 30).

Years.	Schools.	Teachers.			Pupils Enrolled.			Average Attendance of Pupils.	
		Male.	Female.	Total.	Boys.	Girls.	Total.	No.	Per cent.
1901	6,166	2,666	7,134	9,800	247,351	233,778	492,534	275,234	55·81
1906	6,382	2,376	8,368	10,744	243,572	234,812	492,544	285,330	57·81
1911	6,693	2,145	9,871	12,016	253,220	244,708	518,605	305,648	58·94
1916	6,923	2,007	11,730	13,737	273,676	269,214	560,340	355,364	65·44
1917	6,950	1,913	12,141	14,054	280,597	281,268	561,865	369,081	65·69
1918	6,995	1,663	12,604	14,267	281,462	283,193	564,655	328,197	58·16
1919	7,113	1,965	12,836	14,801	292,210	292,414	584,724	388,768	66·49
1920	7,042	2,164	13,177	15,331	302,887	302,036	604,923	396,141	65·49
1921	7,231	2,326	13,666	15,992	318,350	313,773	632,123	446,396	70·62

The discrepancy between the total of pupils enrolled in Ontario from 1901 to 1916 and the number by sex for the same years is due to the inclusion of kindergarten pupils in the total. The number by sex of these kindergarten pupils is not available.

MANITOBA (Elementary and secondary publicly controlled schools for year ended June 30).

1901	1,416	618	1,051	1,669	–	–	51,888	27,550	52·9
1906	1,847	596	1,769	2,365	–	–	64,123	34,947	54·5
1911	2,341	651	2,217	2,868	–	–	80,848	45,303	56·3
1916	2,888	491	2,500	2,991	–	–	103,796	66,561	64·1
1917	3,043	530	2,494	3,024	–	–	106,588	69,209	64·9
1918	3,089	524	2,573	3,097	–	–	109,925	69,968	63·65
1919	3,256	–	–	–	–	–	114,662	72,072	62·86
1920	3,479	669	2,810	3,479	–	–	123,452	88,563	71·74
1921	3,596	796	2,912	3,708	–	–	129,015	86,137	66·76
1922	3,782	924	2,969	3,893	–	–	136,876	95,433	69·72

SASKATCHEWAN (Elementary and secondary publicly controlled schools for year ended December 31).

1906	873	563	733	1,296	16,376	14,899	31,275	15,770	50·31
1911	2,123	1,316	2,175	3,547	37,692	34,568	72,260	38,278	53·00
1916	3,629	1,490	4,187	5,787	66,497	62,942	129,439	71,522	55·30
1917	3,816	1,304	4,430	5,853	72,691	69,926	142,617	88,758	62·24
1918	3,963	1,015	5,047	6,233	76,896	74,430	151,326	91,010	60·14
1919	4,183	1,269	5,117	6,550	83,916	80,303	164,219	98,791	62·16
1920	4,177	1,477	5,332	6,809	88,993	85,932	174,925	106,997	61·16
1921	4,292	1,830	5,330	7,160	93,943	90,998	184,871	117,390	63·50
1922	4,543	1,971	5,254	7,225	93,644	90,291	183,935[1]	119,041	64·72

ALBERTA (Elementary and secondary publicly controlled schools for year ended December 31).

1906	570	280	644	924	14,701	14,083	28,784	14,782	51·00
1911	1,392	867	1,784	2,651	31,753	29,907	61,660	32,556	52·08
1916	2,170	1,355	3,252	4,607	50,375	48,826	99,201	60,271	60·75
1917	2,321	1,267	3,866	5,133	54,446	53,281	107,727	65,374	60·68
1918	2,766	1,090	4,565	5,655	56,011	55,098	111,109	68,489	61·64
1919	2,796	1,082	3,820	4,902	61,206	60,361	121,567	74,776	61·51
1920	2,826	1,161	3,853	5,014	68,045	67,705	135,750	82,417	60·71
1921[2]	2,746	–	–	5,320	62,957	61,371	124,328	89,401	73·5
1922	2,861	1,428	4,359	5,787	72,093	70,809	142,902	100,515	70·3

[1]There were in addition 5,015 not classified by sex. [2]Half year only.

2.—Number of Schools, Teachers and Pupils in Canada, by Provinces, 1901, 1906, 1911, and 1916—1922 or latest year reported—concluded.

BRITISH COLUMBIA (Elementary and secondary publicly controlled schools for year ended June 30.)

Years.	Schools.	Teachers.			Pupils Enrolled.			Average Attendance of Pupils.	
		Male.	Female.	Total.	Boys.	Girls.	Total.	No.	Per cent.
1901	318	185	343	543	12,069	11,546	23,615	15,335	64·94
1906	374	176	477	690	14,524	13,998	28,522	19,809	68·39
1911	533	323	856	1,179	23,162	21,783	44,945	32,517	71·27
1916	810	523	1,541	2,064	32,874	31,696	64,570	50,880	78·78
1917	848	468	1,656	2,124	32,480	32,638	65,118	52,577	80·74
1918	855	436	1,810	2,246	33,540	33,976	67,516	54,748	81·08
1919	873	486	1,846	2,332	35,944	36,052	72,006	56,692	78·73
1920	922	572	1,985	2,557	39,772	39,471	79,243	59,791	75·45
1921	946	595	2,139	2,734	43,442	42,508	85,950	68,497	79·69
1922	991	700	2,294	2,994	46,833	45,086	91,919	75,528	82·16

NOTE.—The totals for teachers in British Columbia in 1901 and 1906 are greater than the sum of the male and the female teachers because no information as to the sex of high school teachers is available. This discrepancy also appears in the Summary for Canada.

SUMMARY FOR CANADA (1901-1921).

1901	18,472	*5,929*	*21,182*	27,126	*505,178*	*494,056*	1,062,527	654,064	61·56
1906	21,096	*6,327*	*25,886*	32,263	*547,447*	*541,325*	1,167,055	742,357	63·61
1911	24,883	*7,818*	*33,642*	40,502	*626,951*	*622,345*	1,350,821	856,956	64·18
1916	28,824	*8,709*	*41,218*	50,307	*746,445*	*749,211*	1,615,892	1,102,450	68·23
1917	29,483	*8,222*	*43,260*	51,601	*758,452*	*774,263*	1,639,303	1,135,788	69·28
1918	30,236	*7,556*	*45,721*	53,438	*765,847*	*787,068*	1,662,842	1,105,696	66·49
1919	30,815	*7,676*	*42,671*	50,511	*800,367*	*817,829*	1,732,868	1,180,074	68·10
1920	31,814	9,045	46,688	55,733	*833,881*	*847,847*	1,804,680	1,229,579	67·58
1921	32,519	8,639	52,617	57,037	*864,119*	*870,889*	1,864,023	1,336,507	71·70

NOTE.—From 1901 to 1905, inclusive, the Summary for Canada comprised the seven provinces of Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba and British Columbia. The two provinces of Saskatchewan and Alberta were formed in 1905, and from 1906 all the nine provinces are included, with the exception of Manitoba for 1912, when no Education Report was issued by that province. The sex of the teachers in the secondary schools of Saskatchewan is not given, and in Manitoba the sex of the pupils was not given for any of the years, while Ontario did not give the sex of its kindergarten pupils until 1917. In the Summary, therefore, these defects are indicated by printing certain items in italics. A general summary for 1922 for all elementary and secondary schools under public control is given in Table 1, pages 876-877.

3.—Teachers in Training in Nova Scotia, New Brunswick, Quebec, Ontario and Manitoba, 1901, 1906, 1911, 1916-1922, Saskatchewan and Alberta, 1906, 1911, 1916—1922.

NOVA SCOTIA.

Number of Teachers in Training in the Provincial Normal College.

Years.	Enrolment.	Years.	Enrolment.	Years.	Enrolment.	Years.	Enrolment.
1901	240	1916	388	1919	255	1921	241
1906	154	1917	263	1920	228	1922	352
1911	268	1918	260				

NEW BRUNSWICK.

Number of Instructors and Teachers in Training in the Normal School.

Years.	Instructors.	Teachers in Training in Normal School.			Years.	Instructors.	Teachers in Training in Normal School.		
		Male.	Female.	Total.			Male.	Female.	Total.
1901	11	41	155	196	1918	20	29	258	287
1906	16	44	263	307	1919	19	13	250	275
1911	16	46	324	370	1920	–	25	242	267
1916	19	45	327	372	1921	–	15	201	216
1917	18	41	331	372	1922	–	46	313	359

3.—Teachers in Training in Nova Scotia, New Brunswick, Quebec, Ontario and Manitoba, 1901, 1906, 1911, 1916-1922, Saskatchewan and Alberta, 1906, 1911, 1916-1921—con.

QUEBEC.

Number of Teachers and Pupils in Normal Schools.

Years.	Schools.	Instructors.			Teachers in Training.			Average attendance.	Per cent.
		Male.	Female.	Total.	Male.	Female.	Total.		
1901	5	31	27	58	97	256	353	345	97·73
1906	5	35	27	62	143	280	423	420	99·29
1911	11	50	79	129	174	666	840	835	99·40
1916	14	52	144	196	191	1,166	1,357	1,357	100·00
1917	14	52	144	196	180	1,181	1,361	1,361	100·00
1918	14	52	153	205	180	1,159	1,339	1,339	100·00
1919	14	57	148	205	159	1,064	1,223	1,135	92·80
1920	14	50	157	207	182	1,320	1,502	1,395	92·87
1921	–	–	–	–	166	1,210	1,376	–	–
1922	–	–	–	–	172	1,217	1,389	–	–

ONTARIO.

Teachers trained 1901, 1906, 1911, 1916 to 1922 inclusive.

Years.[1]	Model Schools.			Provincial Normal Schools.			Normal Colleges, etc.			Total.		Grand Total.
	Male.	Female	Total[3]	Male.	Female	Total.	Male.	Female	Total.	Male.	Female.	
1901	–	–	–	–	–	–	–	–	–	–	–	613
1906	389	1,361	1,750	21	324	345	52	139	191	462	1,824	2,286
1910-11	31	177	208	121	1,145	1,266	–	–	–	152	1,322	1,474
1915-16	43	167	210[2]	211	1,398	1,609	–	–	–	254	1,565	1,819
1916-17	14	131	145	137	1,156	1,293	–	–	–	151	1,287	1,438
1917-18	5	157	162	59	1,455	1,514	–	–	–	64	1,612	1,676
1918-19	–	86	86	44	1,056	1,100	169	304	473	213	1,446	1,659
1919-20	4	77	81	203	1,045	1,248	297	262	559	504	1,384	1,888
1920-21	41	460	514[4]	199	1,282	1,481	150	76	226	390	1,818	2,221
1921-22	57	525	616[4]	273	1,542	1,815	213	140	353	543	2,207	2,784[4]

[1]Previous to 1908, there were 55 County Model Schools in Ontario, in addition to three Normal Schools and the Normal College. The function of these Model Schools was the training of third class teachers, while that of the Normal Schools was generally the training of second class and kindergarten teachers, and that of the College, the training of first class and secondary teachers. In 1908, most of the County Model Schools were abolished and the duty of training teachers for all the Public and Separate Schools except those in the districts and poorer sections of the province was placed upon the Normal Schools, which were increased in number from 3 to 7.

The Department of Education ceased to report the attendance at the Normal College after 1906. This college has been since known by various names. Recently, and up till 1920, its work was done by the Faculty of Education of the Universities of Toronto and Queen's, and the figures for the Normal College given in the above table for 1918-19 and 1919-20 represent the enrolment in the Faculties of Education of these Universities. In 1920 their functions were transferred to the Ontario College of Education.

[2]Autumn Model Schools.

[3]Including extra-mural students.

[4]Includes in 1920-21, 13 and in 1921-22, 34 students not classified by sex.

MANITOBA.

Number of Teachers and Students in Normal Schools.

Years.	Instructors.		Students at		Years.	Instructors.		Students at		
	Provincial Normal.	Local Normal.	2nd class sessions	3rd class sessions		Provincial Normal.	Local Normal.	1st class sessions	2nd class sessions	3rd class sessions.
1901	7	13	90	161	1918	10	7	–	288	225
1906	6	14	148	328	1919	10	5	–	251	303
1911	6	11	126	502	1920	10	4	–	285	308
1916	14	12	331	406	1921	10	4	–	321	321
1917	13	11	309	290	1922	11	5	69	363	220

NOTE.—In Prince Edward Island, teachers are trained in Prince of Wales College; the number of the students in this college training for teachers' diplomas in 1919-20 was 68 men and 152 women, or a total of 220. In British Columbia, teachers are trained at the Normal Schools in Vancouver and Victoria. In 1921-22 there were enrolled in these schools 543 students.

3.—Teachers in Training in Nova Scotia, New Brunswick, Quebec, Ontario and Manitoba, 1901, 1906, 1911, 1916-1922, Saskatchewan and Alberta, 1906, 1911, 1916-1921 —concluded.

SASKATCHEWAN.

Teachers trained 1906, 1911, 1916, to 1921 inclusive.

Years.	First Class.		Second Class.		Third Class.		Total.		Grand Total.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
1906	17	15	46	98	2	10	65	123	188
1911	–	–	28	104	18	91	46	195	241
1916	40	76	48	242	149	356	237	674	911
1917	26	66	38	287	89	575	153	928	1,081
1918	15	91	35	382	14	83	64	556	620
1919	36	95	57	420	71	379	164	894	1,058
1920	15	37	31	164	91	385	137	586	723
1921	21	64	25	155	169	465	215	684	899

ALBERTA.

Teachers trained at Edmonton, Calgary and Camrose Normal Schools 1906, 1911, 1916 to 1921 inclusive.

Years.	First Class.			Second Class.			Total.		Grand Total.	Special Classes[1].	Academic Class.
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.			
1906	–	–	25	–	–	77	27	75	102	–	–
1911	34	47	81	42	125	167	76	172	248	–	–
1916	58	88	146	66	203	269	124	291	415	23	–
1917	31	54	85	32	217	249	63	271	334	24	–
1918	30	121	151	30	286	316	60	407	467	21	–
1919	44	132	176	74	348	422	118	480	598	345	–
1920	39	176	215	75	405	479	114	580	694	–	–
1921	62	198	260	111	472	583	204	706	910	49	18

[1]These classes are designed principally for the purpose of giving teachers from the United Kingdom and United States a short period of training in the special requirements of the Alberta Department of Education. In 1918 a class was added for the purpose of enabling second class teachers to train for a higher professional certificate. The large enrolment in 1919 contained a number of students who desired special qualifications for teaching foreigners.

4.—Number of Teachers and Pupils in Roman Catholic Classical Colleges in Quebec, 1901, 1906, 1911, 1916-1922.

Years.	Number of			Average attendance.	Years.	Number of			Average attendance.
	Colleges.	Professors.	Pupils enrolled.			Colleges.	Professors.	Students enrolled.	
1901	19	549	5,915	5,468	1918	21	747	7,622	6,956
1906	19	621	6,318	5,895	1919	21	744	7,711	6,338
1911	19	642	7,140	6,521	1920	21	742	8,632	7,940
1916	21	704	7,696	6,602	1921	21	797	9,033	8,159
1917	21	747	8,128	6,790	1922	21	830	9,321	8,592

NOTE.—The Roman Catholic Classical Colleges are not included in Table 2 with the other public institutions for the reason that they are special institutions doing university, secondary and even elementary work. The following statistics of secondary schools in Ontario, Saskatchewan and British Columbia have been included in Table 2, and are repeated here mainly to show the differentiation between the sexes in the higher grades.

5.—Number of Teachers and Pupils in Collegiate Institutes and High Schools in Ontario, 1901, 1906, 1911, 1916-1922.

Years.	Schools.	Teachers.	Pupils Enrolled.			Average attendance.	Per cent.
			Boys.	Girls.	Total.		
1901	131	579	10,869	11,654	22,523	13,224	58·71
1906	142	719	13,336	16,056	29,392	18,078	61·50
1911	148	898	14,679	17,548	32,227	20,177	62·60
1916-17	161	1,038	12,339	16,494	28,833	22,781	79·01
1917-18	162	1,051	12,353	16,744	29,097	22,740	78·15
1918-19	164	1,088	13,228	17,504	30,732	24,500	79·72
1919-20	167	1,168	14,681	18,355	33,036	26,816	81·17
1920-21	168	1,302	15,221	18,907	34,128	28,952	84·83
1921-22	170	1,420	18,328	21,077	39,405	34,262	86·96

6.—Number of Teachers and Pupils in Continuation Schools in Ontario, 1911, 1916-1922.

Years.	Schools.	Teachers.	Pupils Enrolled.			Average attendance.	Per cent.
			Boys.	Girls.	Total.		
1911	129	218	2,394	3,359	5,753	3,487	60·61
1916-17	132	234	1,979	3,103	5,082	3,729	73·37
1917-18	137	241	1,989	3,115	5,104	3,734	73·15
1918-19	136	234	1,867	3,139	5,006	3,773	75·36
1919-20	137	244	2,001	3,125	5,126	3,955	77·15
1920-21	144	286	2,304	3,519	5,823	4,790	82·26
1921-22	160	323	3,080	4,425	7,505	6,309	84·06

NOTE.—Previous to 1911 the statistics of these schools were included with those of Elementary Schools.

7.—Number of Teachers and Pupils in Collegiate Institutes and High Schools in Saskatchewan, 1908, 1911, 1916-1922.

Years.	Schools.	Teachers.	Pupils.					
			Boys.	Girls.	1st and 2nd years.	3rd year.	4th year.	Total.
1908	8	23	335	399	487	183	64	734
1911	13	56	766	927	1,003	486	204	1,693
1916	21	138	1,566	2,283	2,398	1,090	361	3,849
1917	22	119	1,445	2,441	2,507	974	405	3,886
1918	22	161	1,533	2,561	2,533	1,065	496	4,094
1919	24	164	1,910	2,841	3,005	1,207	539	4,751
1920	24	198	2,492	3,425	3,946	1,400	571	5,917
1921	24	200	2,944	3,959	4,615	1,617	671	6,903
1922	21	202	2,423	3,204	3,925	1,250	452	5,627

8.—Number of Teachers and Pupils in High Schools in British Columbia, 1901, 1906, 1911, 1916-1922.

Years.	Schools.	Teachers.	Pupils Enrolled.			Average attendance.	Per cent.
			Boys.	Girls.	Total.		
1901	5	15	215	369	584	373	63·87
1906	13	37	473	763	1,236	923	74·68
1911	23	71	940	1,048	1,988	1,533	77·11
1916	40	162	2,260	2,510	4,770	3,816	80·00
1917	41	169	2,074	2,767	4,841	3,999	82·61
1918	43	184	2,151	2,999	5,150	4,201	81·57
1919	45	197	2,392	3,414	5,806	4,670	80·44
1920	48	234	2,826	3,810	6,636	5,359	80·79
1921	52	251	3,093	4,166	7,259	6,132	84·48
1922	58	301	3,788	4,846	8,634	7,481	86·64

9.—Receipts and Expenditure for Public Education in Canada, by Provinces, 1901, 1906, 1911, 1916-1922[2].

PRINCE EDWARD ISLAND.

(RECEIPTS).

Years.	Government Grant.	Local Assessment.	Total.	Years.	Government Grant.	Local Assessment.	Total.
	$	$	$		$	$	$
1901	128,288	36,647	164,935	1918	173,579	94,968	268,547
1906[1]	91,946	34,763	126,709	1919	187,488	98,472	285,960
1911	126,438	54,738	181,176	1920	211,618	131,030	342,648
1916	173,962	70,610	244,572	1921	244,347	152,431	396,778
1917	178,607	72,623	251,230	1922	271,103	157,766	428,869

[1]Nine months. [2]For other years, see 1921 Year Book, pp. 148-153.

9.—Receipts and Expenditure for Public Education in Canada, by Provinces, 1901, 1906, 1911, 1916-1922—con.

NOVA SCOTIA.

(RECEIPTS).

Years.	Government Grant.	Municipal Funds.	Local Assessment.	Total.
	$	$	$	$
1901	254,778	119,876	470,108	844,762
1906	270,925	147,089	655,705	1,073,720
1911	378,726	146,823	804,125	1,329,674
1916	414,738	168,114	1,037,302	1,620,154
1917	432,284	163,535	1,157,907	1,753,726
1918	427,484	163,994	1,280,965	1,872,444
1919	432,496	204,519	1,460,578	2,097,593
1920	485,787	224,025	1,978,242	2,634,763
1921	576,591	495,242	2,370,712	3,442,546
1922	616,389	502,804	2,527,377	3,646,570

NEW BRUNSWICK (RECEIPTS).

	$	$	$	$
1901	163,225	90,492	346,623	600,340
1906	160,957	91,718	No record.	
1911	196,082	90,193	593,073	879,348
1916	206,486	96,141	844,256	1,146,883
1917	204,754	97,284	843,357	1,145,395
1918	286,949	97,230	930,567	1,314,746
1919	277,996	99,097	1,153,163	1,530,256
1920	290,028	103,629	1,364,915	1,758,572
1921	352,693	146,003	1,779,926	2,278,622
1922	381,075	195,948	2,080,023	2,657,046

QUEBEC (EXPENDITURE).

Years.	Government Grant.	Local Assessment and other sources.	Total.	Years.	Government Grant.	Local Assessment and other sources.	Total.
	$	$	$		$	$	$
1901	453,950	2,999,804	3,453,754	1918	2,077,569	12,405,301	14,482,870
1906	536,150	3,802,402	4,338,552	1919	2,145,976	14,698,708	16,844,684
1911	1,065,429	5,729,104	6,794,533	1920	2,334,108	16,867,297	19,201,405
1916	1,882,838	10,533,769	12,416,607	1921	2,351,471	19,771,508	22,122,979
1917	2,068,766	11,887,454	13,956,220				

ONTARIO (RECEIPTS).

Years.	Elementary Schools.				Total for Secondary Schools.	Grand Total.
	Government Grant.	Local Assessment.	Clergy Reserve Fund and other sources.	Total.		
	$	$	$	$	$	$
1901	377,308	3,784,070	1,468,678	5,630,056	784,626	6,414,682
1906	509,795	5,529,496	1,883,394	7,922,685	1,209,782	9,132,467
1911	892,377	7,826,083	3,778,183	12,496,643	2,180,026	14,676,669
1916	831,988	11,010,356	4,327,738	16,080,082	3,380,927	19,461,009
1917	907,846	12,193,439	4,168,000	17,269,285	3,412,115	20,681,400
1918	970,585	13,114,725	4,278,957	18,364,267	3,931,788	22,296,055
1919	1,316,529	14,364,049	6,912,656	22,593,234	4,437,247	27,030,481
1920	1,612,837	18,766,800	9,413,521	29,793,158	6,102,956	35,896,114
1921	2,454,018	21,195,263	11,461,271	35,110,552	8,745,050	43,855,602

9.—Receipts and Expenditure for Public Education in Canada, by Provinces, 1901, 1906, 1911, 1916-1922—con.

ONTARIO (EXPENDITURE).

Years.	Elementary Schools.					Total for Secondary and Technical schools.	Grand Total.
	Teachers' Salaries.	Sites and building school-houses.	Maps, apparatus, prizes, etc.	Rent, repairs, fuel, and other expenses.	Total for Elementary schools.		
	$	$	$	$	$	$	$
1901	3,055,321	531,072	81,685	1,052,232	4,720,310	728,132	5,448,442
1906	3,880,548	854,452	108,547	1,559,659	6,403,206	1,029,294	7,432,500
1911	5,610,213	2,164,459	139,229	1,990,383	9,904,284	2,200,138	12,104,422
1916	7,929,490	2,232,110	192,212	2,998,093	13,351,905	2,794,402	16,146,307
1917	8,398,450	1,937,644	290,207	3,435,534	14,111,835	2,743,596	16,855,431
1918	9,027,151	1,242,642	169,136	4,737,794	15,176,723	3,412,167	18,588,890
1919	10,160,399	2,870,349	302,046	5,518,833	18,851,627	3,795,816	22,647,443
1920	13,070,038	4,792,571	333,288	7,020,615	25,216,512	5,409,923	30,626,435
1921	15,473,049	5,605,341	418,370	8,218,033	29,714,793	7,024,771	36,739,564

MANITOBA.

Years.	RECEIPTS.						
	Legislative grant.	Municipal taxes.	Debentures.	Promissory notes.	Sundries.	Balance from previous years.	Total.
	$	$	$	$	$	$	$
1907	242,383	1,223,336	315,271	802,574	141,452	115,677	2,840,693
1911	325,410	1,847,380	1,318,068	1,275,239	76,172	399,539	5,241,808
1916	503,774	3,296,667	344,673	2,080,204	239,176	609,982	7,074,476
1917	522,293	3,445,239	321,370	947,486	108,046	376,318	5,720,752
1918	616,977	3,736,45[illegible]	240,855	1,142,289	133,111	416,194	6,285,878
1919	589,174	4,200,519	188,931	1,165,751	264,710	508,348	6,917,406
1920	691,981	4,947,186	402,181	2,208,019	432,110	436,168	9,117,644
1921	822,186	6,922,864	2,250,073	2,773,212	280,644	457,312	13,506,292
1922	1,058,292	7,991,517	1,832,134	2,613,709	242,840	563,183	14,301,675

Years.	EXPENDITURE.				
	Teachers' Salaries.	Building, etc.	Fuel.	Repairs and caretaking.	Salary of Sec.-Treas.
	$	$	$	$	$
1907	1,009,224	460,260	79,963	126,216	23,420
1911	1,452,630	1,199,288	109,299	167,734	29,218
1916	2,195,226	823,266	165,697	358,315	41,530
1917	2,314,006	382,988	171,462	385,226	19,806
1918	2,382,840	440,221	197,258	418,660	46,249
1919	2,648,230	556,072	243,155	372,323	51,553
1920	3,296,035	958,933	354,076	479,192	96,086
1921	4,335,5[illegible]9	2,081,176	393,160	741,058	91,412
1922	5,016,903	1,947,527	512,016	746,642	140,414

Years.	Principal of Debentures.	Interest on Debentures.	Promissory notes.	Other expenditure.	Total.
	$	$	$	$	$
1907	81,795	80,392	667,791	200,856	2,729,917
1911	131,975	144,735	1,590,565	199,446	5,024,890
1916	194,257	409,193	2,132,286	338,459	6,658,229
1917	241,223	155,619	1,196,806	466,166	5,333,302
1918	360,134	357,409	1,055,581	651,031	5,909,383
1919	391,332	400,754	1,305,433	649,888	6,618,740
1920	347,356	439,946	1,802,294	1,053,174	8,827,092
1921	420,323	496,565	3,049,437	1,470,545	13,079,205
1922	485,365	610,418	2,666,484	1,439,055	13,564,824

NOTE.—For a summary of the principal items of Receipts and Expenditure from 1901 to 1906, see Year Book of 1915, page 128. From 1907 the items are given in greater detail, as above. Owing to change of year, no figures were published for 1912.

9.—Receipts and Expenditure for Public Education in Canada, by Provinces, 1901 1906, 1911, 1916-1922—con.

SASKATCHEWAN (RECEIPTS).

Years.	Elementary Schools.					Secondary Schools.		Grand Total.
	Government Grant.	Local Assessment.	Proceeds of Debentures.	Other sources.	Total.[1]	Government Grant.	Total.[1]	
	$	$	$	$	$	$	$	$
1906	174,218	602,624	360,206	328,313	1,465,361	–	–	1,465,361
1911	555,438	1,519,528	659,270	1,295,556	4,029,792	–	–	4,029,792
1916	969,709	4,694,242	649,300	2,999,443	9,312,694	77,158	593,144	9,905,838
1917	1,104,156	4,954,200	–	4,213,371	10,271,727	83,496	704,485	10,976,212
1918	1,162,490	5,618,192	455,777	1,874,459	9,110,925	99,793	276,161[2]	9,387,086
1919	1,255,094	7,121,046	1,105,692	2,012,422	11,494,164	83,925	355,741[2]	11,849,905
1920	1,229,934	8,826,175	1,516,765	2,341,770	13,914,643	107,133	444,791	14,359,434
1921	1,346,459	9,619,615	1,475,882	2,546,736	14,988,692	145,151	4,020,432	19,009,124

[1]The total expenditure for secondary schools was included in that of the elementary schools up to 1912.
[2]This item in 1918 and 1919 does not include money borrowed by note.

SASKATCHEWAN (EXPENDITURE).

Years	Teachers' Salaries.	Officials' Salaries.	Paid on Debentures.	Paid on Notes (renewals and interest).	School buildings and repairs.	Caretaking and fuel.	Total Expenditure.	Secondary Schools.		Grand Total.
								Teachers' Salaries.	Total[1].	
	$	$	$	$	$	$	$	$	$	$
1906..	471,736	29,076	113,958	303,739	339,933	47,251	1,448,915	–	–	1,448,915
1911..	1,298,925	84,603	369,951	1,071,783	619,691	72,993	3,990,036	–	–	3,990,036
1916..	2,956,666	–	–	–	1,105,765	–	9,211,390	175,098	580,628	9,792,018
1917..	3,303,929	–	–	–	1,136,599	–	10,117,716	190,703	686,392	10,804,108
1918..	3,831,942	–	1,020,574	1,588,995	845,974	–	9,183,975	209,085	1,293,110	9,477,085
1919..	4,813,000	–	809,999	1,737,892	1,369,833	–	11,433,258	235,460	1,350,685	11,783,943
1920..	5,940,869	–	813,266	2,178,134	1,928,150	–	14,141,188	325,497	468,477	14,609,665
1921..	6,890,376	–	864,304	2,169,914	1,702,327	–	15,074,266	382,824	538,065	15,612,331

[1]The secondary school expenditure was included in that of the elementary schools until 1912: the items for 1918, 1919 and 1920 do not include promissory notes.

ALBERTA (RECEIPTS).

Years.	Government Grant.	Local Assessment.	Proceeds of Debentures.	Borrowed by Note.	Other sources.	Total.
	$	$	$	$	$	$
1906	142,836	416,344	297,158	292,786	140,797	1,289,921
1911	432,877	1,575,412	1,481,173	1,461,208	120,363	5,071,033
1916	553,141	3,749,007	155,883	1,105,538	1,203,814	6,767,383
1917	652,557	3,657,510	268,102	1,451,229	497,479	6,526,878
1918	625,830	5,132,232	433,126	1,173,546	195,990	7,560,724
1919	713,083	5,601,713	655,960	1,388,001	410,235	8,768,992
1920	885,524	6,894,401	865,195	1,948,257	279,776	10,873,153
1921	1,146,722	7,432,936	814,008	2,321,144	323,242	12,038,052

ALBERTA (EXPENDITURE).

Years.	Teachers' Salaries.	Officials' Salaries.	Paid on Debentures.	Paid on Notes (renewals and interest).	School buildings and repairs.	Other Expenditure.	Total Expenditure.
	$	$	$	$	$	$	$
1906	386,108	23,796	94,947	298,984	274,525	180,747	1,259,107
1911	1,144,584	87,409	408,442	1,309,134	1,223,142	853,062	5,025,773
1916	2,421,404	230,931	956,563	1,266,884	325,297	920,535	6,121,614
1917	2,620,085	193,484	1,100,181	1,068,058	414,105	1,199,649	6,595,562
1918	2,860,352	198,870	1,054,044	1,598,757	604,891	1,179,777	7,496,691
1919	3,560,318	225,242	1,051,171	1,503,944	765,935	1,698,919	8,805,529
1920	4,371,508	258,249	1,053,328	1,785,432	1,092,863	2,082,949	10,644,329
1921	5,213,011	298,003	1,141,660	2,218,782	1,120,851	2,142,181	12,134,488

9.—Receipts and Expenditure for Public Education in Canada, by Provinces, 1901, 1906, 1911, 1916-1922—concluded.

BRITISH COLUMBIA (EXPENDITURE).

Years.	Provincial Government.	Cities, Municipalities, Rural and Assisted Schools.	Total.	Years.	Provincial Government.	Cities, Municipalities, Rural and Assisted Schools.	Total.
	$	$	$		$	$	$
1901	350,532	182,160	532,692	1918	1,653,797	1,865,218	3,519,015
1906	444,543	244,198	688,741	1919	1,791,154	2,437,566	4,228,720
1911	1,001,808	1,639,714	2,641,522	1920	2,155,935	3,314,246	5,470,180
1916	1,591,322	1,625,028	3,216,350	1921	2,931,572	4,238,458	7,170,030
1917	1,600,125	1,637,539	3,237,664	1922	3,141,738	4,691,840	7,833,578

10.—Average Annual Salaries of School Teachers, by Provinces, 1921-22 or latest year reported.

Province and Class of Certificate.	Male.	Female.	Province and Class of Certificate.	Male.	Female.
	$	$		$	$
Prince Edward Island, 1922—			Saskatchewan, 1921[2]—		
First class	844	659	Rural schools—		
Second class	565	508	First class	1,452	1,388
Third class	464	407	Second class	1,398	1,321
			Third class	1,356	1,258
Nova Scotia, 1922—			Provisional	1,310	1,253
Class A	1,465	910	Cities, towns and villages—		
Class B	1,185	710	First class	2,013	1,466
Class C	673	578	Second class	1,657	1,312
Class D	560	447	Third class	1,446	1,213
Academic	2,014	1,369	Provisional	1,496	1,364
New Brunswick, 1922—					
First class	1,596	1,007	Alberta, 1922—		
Second class	785	734	First class	1,720	1,287
Third class	575	574	Second class	1,288	1,190
Superior schools	1,328		Third class	1,192	1,133
Grammar schools	2,346	1,787	Permit	1,066	1,046
			Specialist	2,066	1,578
Quebec, 1921[1]—			Pending[3]	1,205	1,086
Protestant schools	2,300	1,013			
Roman Catholic schools	1,280	308	British Columbia, 1922—		
			High schools—		
Ontario, 1921—			Academic	2,555	2,009
Public and Separate schools—			City graded schools—		
First class	2,236	1,180	Academic	2,515	1,362
Second class	1,436	1,101	First	2,399	1,456
Third class and district certificate	928	845	Second	1,643	1,301
			Third	1,497	1,100
High Schools and Collegiate Institutes, 1922—					
Principals	2,836		Rural Municipality schools—		
Assistants	2,527	1,961	Academic	1,536	1,192
Continuation Schools—			First	2,029	1,274
Principals	1,754		Second	1,485	1,173
Assistants	1,433	1,408	Third	1,147	1,129
Manitoba, 1918—			Rural and Assisted schools—		
Highest salary	3,600		Academic	1,228	1,110
Average salary for province	794		First	1,437	1,101
Average, cities and towns	962		Second	1,182	1,048
Highest rural school	1,000		Third	1,031	1,069
Average rural school	628				

[1]In the figures for Quebec lay teachers only are included. [2]In Saskatchewan, only elementary school teachers are included; in 1921 the average salary of secondary teachers was about $2,241. [3]*Pending* means teachers with certificates from other provinces.

II.—VOCATIONAL AND TECHNICAL EDUCATION.

As late as the seventies and eighties of the last century little vocational education was given in the schools; private business colleges were established in the cities about this time.

Among the first vocational courses to be introduced into schools were commercial courses, which were introduced into the high school curricula of Ontario and Manitoba in 1899, in British Columbia in 1905, and in Saskatchewan and Alberta about the same time. The classical colleges of Quebec were also among the first to provide a commercial course for those of their pupils who did not desire to enter the professions, and a school for commercial studies was founded in 1907 at Montreal.

Agriculture was first taught in special colleges, the Ontario Agricultural College at Guelph, a government institution, being founded in 1874, the Nova Scotia Agricultural College in 1888, the Manitoba Agricultural College in 1903, Macdonald College at Ste. Anne de Bellevue, Que., in 1907. The agricultural college at Ste. Anne de la Pocatière, Quebec, the first in Canada and the second on the continent, had been founded in 1859, while the Oka Agricultural Institute was established in 1890. The Ontario Veterinary College, founded in Toronto as a private venture in 1862, was one of the first on the continent, and for many years drew its students very largely from the United States. In 1908 it was taken over by the Ontario Government, and has recently been transferred to Guelph.

Training in handicrafts was introduced into the schools in the form of manual training for boys and domestic science for girls. The former was originally intended merely as a training in the use of tools, partly as a recreation and partly as a means whereby the boy could get some idea of his capacity as a mechanic. A form of this manual training was introduced into Ontario schools in 1883, and into the schools of Nova Scotia in 1891; in the latter province it was made compulsory for teachers in training in 1893. In the Prairie Provinces manual training was introduced in the first decade of the present century.

The second decade of the century has, however, seen the most rapid development in technical and vocational education. Following upon the publication of Dr. Seath's report on *Education for Industrial Purposes* and the report of the Royal Commission of 1910 on *Industrial Training and Technical Education*, published in 1913, technical education has made rapid strides, partly due to the stimulus given to manufactures by the war. By 1915, manual training courses in Ontario had branched out into industrial, technical and art schools and in that year a large technical school was opened in Toronto. The Kelvin and St. John's Technical Schools in Winnipeg date from 1911, and the great technical school in Montreal from the same year.

Aid Given by Dominion Government.—While educational administration is a matter for the provinces, the Dominion Government, realizing the national importance of vocational education, has supplemented the provincial funds available for these purposes. In 1913 was passed the Agricultural Instruction Act, distributing $10,000,000 in ten years among the provinces for the advancement of agricultural education. In 1919 a similar sum was voted for technical education to be divided within ten years among the provinces approximately in proportion to population, but so as not to exceed the sums expended by the provinces on technical education. These grants have been most effective in turning the attention of the provincial authorities toward vocational education, which is making great strides, especially in the eastern manufacturing provinces.

11.—Vocational Schools, Teachers and Pupils in Canada, year ended June 30, 1922.[1]

Provinces.	Number of Schools.			Number of Teachers.				Pupils Enrolled.			
	Day.	Evening.	Total.	Day.	Evening.	Correspond'ce Dept.	Total.	Day.	Evening.	Correspond'ce Dept.	Total.
Prince Edward Isl'd.	1	1	2	7	3	–	10	94	72	–	166
Nova Scotia	2	30	32	4	152	24	180	23	2,884	186	3,093
New Brunswick	4	18	22	21	53	2	76	255	1,135	1,541	2,931
Quebec	9	20	29	76	140	–	216	1,276	4,882	–	6,158
Ontario	18	69	87	191	909	–	1,100	4,526	27,297	–	31,823
Manitoba	16	4	20	45	85	–	130	3,507	2,295	–	5,802
Saskatchewan	4	4	8	24	70	–	94	947	1,720	–	2,667
Alberta	9	25	34	69	121	3	193	1,362	1,840	275	3,477
British Columbia	13	36	49	90	178	1	269	1,598	4,094	152	5,844
Totals	**76**	**207**	**283**	**527**	**1,711**	**30**	**2,268**	**13,588**	**46,219**	**2,154**	**61,961**

[1]The vocational schools of which the statistics are given in this table include only such schools, classes or courses as receive grants under the Dominion Technical Education Act. The enrolment of these, together with the enrolment of other schools doing technical work, but not receiving grants under the Act, is given in Table 1, item 2. Schools conducting both day and evening classes are included under both headings. Teachers engaged in both day and evening work are also shown twice. Enrolments are the maximum number reported during the year. In Ontario the commercial classes in each locality are shown separately.

III.—HIGHER EDUCATION.

Higher education in Canada is carried on in 23 universities and 65 colleges, including 21 classical colleges in Quebec. The last mentioned, although officially classed as secondary institutions, offer university courses, and carry a number of their students as far as a degree in arts, the degree being conferred by Laval University and the University of Montreal. Of the universities, six are State controlled (New Brunswick, Toronto, Manitoba, Saskatchewan, Alberta and British Columbia); four others are undenominational (Dalhousie, McGill, Queen's and Western); while the remainder are denominational, St. Dunstan's, St. Francis Xavier, St. Joseph's, Laval, Montreal and Ottawa representing the Roman Catholic Church, King's College, Bishop's College and Trinity College representing the Church of England, Acadia and McMaster representing the Baptist Church, and Mount Allison and Victoria representing the Methodist Church. Victoria and Trinity are in federation with Toronto.

The 65 colleges may be roughly classified as: 6 agricultural, 2 technical, 2 law, 1 dentistry, 1 veterinary, 1 school for pharmacy, 18 theological, 10 affiliated for arts and pure science, 21 classical, and 3 miscellaneous. This classification is rough, for the reason that a large number of theological and other colleges offer courses in arts or preparatory courses. Macdonald College, in Quebec, for example, might be classified as either agricultural or affiliated, or it might be excluded from the list of colleges and considered among the faculties of McGill University. It is included above among the agricultural colleges. According to this rough classification, the agricultural colleges are: Nova Scotia Agricultural College; Macdonald College, Oka, and Ste. Anne de la Pocatière, in Quebec; Ontario Agricultural College and Manitoba Agricultural College. The technical colleges are Nova Scotia Technical College, and Alberta Institute of Technology and Art. The law schools are Ontario and Manitoba. The dental, veterinary and pharmaceutical colleges are in Ontario. The exclusively theological colleges are: Presbyterian College and the Holy Heart College in Nova Scotia; Montreal Diocesan, Wesleyan and the Congregational College in Quebec; Knox, Toronto Bible, Waterloo, Huron and Wycliffe in Ontario; Manitoba College and St. John's in Manitoba; St. Chad's, Presbyterian, and Emmanuel in Saskatchewan; Robertson and Alberta Colleges in Alberta, and the Anglican Theological College in British Columbia. The affiliated colleges for arts etc. are: Prince of Wales, in Prince Edward Island; St. Anne's and St. Mary's, in Nova

Scotia; the Presbyterian, in Quebec; St. Michael's and St. Jerome's, in Ontario; Brandon and Wesley, in Manitoba; Edmonton Jesuit, in Alberta; and Columbian Methodist College, in British Columbia. The miscellaneous colleges are: Ecole des Hautes Etudes Commerciales in Quebec; and the Ontario College of Art and the Royal Military College in Ontario. The Edmonton Jesuit College is a classical college and associated with Laval University, but the 21 classical colleges above mentioned are all situated in Quebec and affiliated or annexed to the Catholic universities. An "affiliated" college in Quebec means a college of which the university has direct control of the courses and degrees; an "annexed" college is one of which the university merely approves the curriculum and by laws, is represented at the examinations and sanctions the diplomas awarded; an "associated" college is an affiliated college situated outside the province. St. Dunstan's University, St. Mathieu's classical college at Gravelburg, Sask., and the Edmonton Jesuit College are thus "associated" with Laval University.

Registration of Students.—The number of students registered in universities during the year 1922 was 10,821 in State-controlled institutions (teaching staff, 1,038); 6,704 in other undenominational institutions (staff, 674); and 14,267 in denominational institutions (staff, 1,425); making a grand total of 31,792[1] with a teaching staff of 3,137. These, however, are the gross registrations, including duplicate registrations at federated universities, affiliated colleges and preparatory secondary schools. In colleges the gross registration was 3,439 in agricultural colleges; 912 in technical colleges; 453 in law schools; 1,064 in schools of dentistry, pharmacy and veterinary medicine; 1,122 in theological colleges; 2,724 in colleges affiliated for arts, etc.; 9,321 in classical colleges; and 1,051 in miscellaneous colleges, making a grand total of 20,086.

The net result after excluding these duplicates was 49,900[2] in both universities and colleges. These included 8,322 in preparatory courses offered at 23 institutions (out of 88); 10,282 undergraduates in arts and pure science; 1,091 in graduate courses; 3,295 in medicine; 2,567 in engineering and applied science; 1,227 in music; 1,577 in theology; 488 in social science; 915 in commerce; 1,095 in law; 525 in pharmacy; 250 in banking, 1,258 in dentistry; 52 in architecture; 1,570 in agriculture; 668 in pedagogy; 589 in household science; 212 in nursing; 107 in forestry; 162 in veterinary medicine; 2,035 in summer schools for teachers; 1,615 in summer schools for others than teachers; 4,097 in other short courses (including secondary technical work in one technical college); 1,747 in correspondence; 511 in all other courses; and 9,502 in classical colleges, from which a certain number (about 1,500), already included in arts, might be deducted. The difference between the sum of these figures and the net total given above is due to duplication of courses. It will be noticed that outside of arts, etc. the largest registration is to be found in medicine, engineering, and short courses other than agriculture, the last of which registers over 7,000 students. These figures do not include over 14,000 extra-mural students in agriculture in connection with the University of Saskatchewan. Table 1 shows that the grand total in short courses was 24,082. It will also be noticed that, excluding preparatory courses, the first ten in order of size are: (1) arts, etc., (2) short courses other than agriculture, (3) medicine, (4) engineering, (5) correspondence, (6) theology, (7) agriculture, (8) dentistry, (9) music, and (10) pharmacy—each of which registers over a thousand students. Attention is particularly called to the registration in summer schools for teachers, as this may have momentous significance.

[1]The duplicate registrations in the federated universities of Victoria and Trinity are excluded from this figure. [2]For a net result as between universities, colleges and secondary preparatory schools see Table 1. To secure this final net result it was found necessary to use 1921 figures in the case of one province. Including classical colleges and extra-mural courses in agriculture the net total for all university and college registration was 62,687.

Degrees Conferred.—The number of first degrees conferred by universities during the year was 3,248, and of graduate degrees 644. The latter degrees were conferred by 21 institutions, but 217, or nearly half, were conferred by 2 institutions, Toronto and Montreal, while 484, or 74 per cent, were conferred by 4 institutions—Toronto, Montreal, Laval and Ottawa. In these four institutions, the graduate degrees were conferred in the following faculties or courses: arts 96; pure science 7; letters 7; philosophy 43; commerce 40; education 3; agriculture 16; applied science and engineering 30; forestry 3; law 53; architecture 6; medicine 82; dentistry 28; music 1; pharmacy 19; veterinary medicine 5; theology 46 and social science 7. The difference between the sum of these figures and the total of 484 is due to duplication between courses. Of these graduate degrees, 7 were honorary. It is clear from the above figures that, with the exception of degrees in arts, pure science, letters, philosophy and education (155 in all), these degrees are not graduate degrees in the ordinary sense of the term—that is, degrees conferred for advanced work in a course from which the student has already graduated and received a first degree—but such degrees as M.D., which are really first degrees in Medicine, but are conferred on students who have already received the degree of B.A., B.Sc., etc. Table **12** shows the nature of the degrees conferred by each university.

Financial Statistics.—The financial statistics show that the income of both universities and colleges in 1921-22 was $12,075,047, of which $5,148,626 was in government and municipal grants and $2,577,239 in fees, the corresponding figures for universities alone being $9,609,830, $4,527,116 and $1,994,076 respectively. (Table **16**). The total expenditure for both classes of institutions was $13,796,803 of which $9,849,707 was on current account.

The government and municipal grants to universities were distributed as follows: $4,041,680 to State controlled universities, $257,305 to other undenominational universities.

12.—Universities of Canada: Foundation, Affiliation, Faculties and Degrees.

Name and Address.	Date of		Affiliation to other Universities.	Faculties.	Degrees.
	Original Foundation.	Present Charter.			
University of St. Dunstan's, Charlottetown, P.E.I.	1855	—	Laval.	Arts, Preparatory and Commercial, Theology.	B.L., B.A., B.Sc., Ph.M.
University of Kings' College, Windsor, N.S.	1789	1802	Oxford and Cambridge.	Arts, Law, Science, Divinity.	B.A., M.A., B.Sc., D.Sc., M.Sc., B.C.L., D.C.L., B.D., D.D.
Dalhousie University, Halifax, N.S.	1818	1863	Oxford and Cambridge.	Arts and Science, Law, Medicine and Dentistry.	B.A., M.A., B.Sc., L. Mus., M.Sc., B.Mus., Phm. B., LL.B., M.D., C.M., D.D.S., LL.D. (Hon.).
Acadia University, Wolfville, N.S.	1838	1840	Oxford, Dalhousie and McGill, Nova Scotia Technical.	Arts, Divinity, Law, Science, Applied Science, Literature.	B.A., B.Sc., B. Th., and M.A.
University of St. Francis Xavier, Antigonish, N.S.	1855	1909	—	Arts, Science, Engineering, Law.	B.A., M.A., B.Sc., LL.D.
University of New Brunswick, Fredericton, N.B.	1800	1860	Oxford, Cambridge, Dublin, McGill.	Arts, Applied Science, Partial Course in Law.	B.A., M.A., B.Sc., In Civil Engineering, Electrical Engineering or Forestry, D.Sc.
Mount Allison University, Sackville, N.B.	1858	1886-1913	Dalhousie, Oxford and Cambridge.	Arts, Theology, Engineering.	B.A., M.A., B.Sc., B.D.

12.—Universities of Canada: Foundation, Affiliation, Faculties and Degrees—con.

Name and Address.	Date of Original Foundation.	Date of Present Charter.	Affiliation to other Universities.	Faculties.	Degrees.
University of St. Joseph's College, St. Joseph, N.B.	1864	1898	Oxford.	Arts, Science.	B.A., B.S., B.L., B.C.S., M.A.
McGill University, Montreal, Que.	1821	1852	Acadia, Mount Allison, St. Francis Xavier, Alberta, are affiliated to McGill in the Faculty of Applied Science.	Arts, Applied Science, Law, Medicine, Agriculture.	B.A., M.A., B.C.L., D.C.L., LL.D., B.Sc., D.Sc., D.D.S., M. Sc., Mus. Bac., Mus. Doc., B.S.A., D.Sc., B. Arch., M.D., C.M., D. Litt., Ph. D., LL.B., LL.M., B. Com., B.H.S.
University of Bishop's College, Lennoxville, Que.	1843	1853	Oxford and Cambridge.	Arts, Divinity, Medicine and Law	B.A., M.A., B.D., D.D., D.C.L., Mus. Bac., Mus. Doc., L.S.T.
Laval University, Quebec, Que.	1852	1852	—	Theology, Law, Medicine, Arts.	M.A., B.A., B.S., B.L., Ph.D., Ph.L., Ph.B., M.D., M.B., LL. B., LL.L., LL.D., D.B., D.L., D.D., C.L.B., C.L.L., C.L.D.
University of Montreal, Montreal, Que.	1878	1920	—	Theology, Law, Medicine, Arts, Domestic Science, Drawing, Religious and Profane Music.	Bachelor, Licenciate, Doctor.
University of Toronto, Toronto, Ont.	1827	1906	Oxford, Cambridge and Dublin.	Arts, Medicine, Applied Science, Engineering, Agriculture, orestry, Education, Household Science.	B.A., M.A., Ph.D., LL.B., LL.M., LL.D., Mus. Bac., Mus. Doc., M.B., M.D., B. A.Sc., M.A.Sc., C.E., E.E., M.E., B. Pæd., D. Pæd., B.S.A., B.Sc.A., B.Sc.F., F.E., D.D.S., Phm. B., B.V.Sc., D.V.Sc.
Victoria University, Toronto, Ont.	1836	1836	Toronto.	Arts and Theology.	B.D., D.D.
University of Trinity College, Toronto, Ont.	1851	1852	Toronto.	Arts and Divinity.	L. Th., B.D., D.D.
Western University, London, Ont.	1878	1908	—	Arts, Medicine and Public Health, Music.	B.A., M.A., M.D., LL.D., D.Sc., D.P.H., Mus. Bach.
Queen's University, Kingston, Ont.	1841	1841	—	Arts, Science, Engineering, Medicine, Theology.	B.A., M.A., B.Sc., D.Sc., M.Sc., M.D., M.B., LL.D., B.D., D.D., B. Pæd., D. Pæd., B. Com.
University of Ottawa, Ottawa, Ont.	1849	1866	—	Theology, Philosophy, Law, Arts and Commercial.	LL.D., D.D., B.Ph., D.Ph., B.A., M.A.
McMaster University, Toronto, Ont.	1857	1887	Oxford, Cambridge, London	Arts, Theology.	B.A., M.A., B.Sc., B. Th., B.D.
University of Manitoba, Winnipeg, Man.	1877	1877	—	Arts, Science, Law, Medicine, Engineering, Architecture, Pharmacy, Agriculture.	B.A., M.A., B.Sc., M.D., C.M., B.C.E., B.E.E., M.C.E., M.E.E., B.M.E., B. Arch., Phm.B., B.S.A., LL.B., LL.D.
University of Saskatchewan, Saskatoon, Sask.	1907	1907	Oxford.	Arts, Science, Law, Agriculture, Engineering, Pharmacy, Accounting, Education, Veterinary Medicine.	B.A., B.Sc., B.S.A., B.E., LL.B., M.A., M. Sc.

12.—Universities of Canada: Foundation, Affiliation, Faculties and Degrees —concluded.

Name and Address.	Date of Original Foundation.	Date of Present Charter.	Affiliation to other Universities.	Faculties.	Degrees.
University of Alberta, Edmonton, Alberta.	1906	1910	Oxford, McGill and Toronto.	Arts and Sciences, Applied Science, Agriculture, Medicine, Dentistry, Law, Schools of Pharmacy and Accountancy.	B.A., B.Sc., M.A., B.S.A., M.Sc., LL.B., Phm. B., B.D., LL.D.
University of British Columbia, Vancouver, B.C.	1907	1908	—	Arts, Applied Science and Agriculture.	B.A., B.Sc.

13.—Universities of Canada: Number of Teaching Staff in the Various Faculties, 1921-22.

Name and Address of University.	Sex.	Professors and Instructors.							
		Arts and Pure Science.	Engineering.	Law.	Medicine.	Pharmacy.	Theology.	All others.	Total.[1]
St. Dunstan's University, Charlottetown, P.E.I.	M.	8	–	–	–	–	–	12	14
	F.	–	–	–	–	–	–	–	–
University of King's College, Windsor, N.S.	M.	13	–	7	–	–	6	–	20
	F.	1	–	–	–	–	–	–	1
Dalhousie University, Halifax, N.S.	M.	28	–	19	40	–	–	17	104
	F.	1	–	–	1	–	–	–	2
Acadia University, Wolfville, N.S.	M.	20	6	–	–	–	4	–	20
	F.	2	–	–	–	–	–	–	2
University of St. Francis Xavier, Antigonish, N.S.	M.	21	5	–	1	–	–	8	19
	F.	–	–	–	–	–	–	–	–
University of New Brunswick, Fredericton, N.B.	M.	10	9	–	–	–	–	11	12
	F.	–	–	–	–	–	–	–	–
University of Mt. Allison, Sackville, N.B.	M.	19	11	–	–	–	–	–	20
	F.	–	–	–	–	–	–	–	–
University of St. Joseph's College, St. Joseph, N.B.	M.	14	–	–	–	–	2	24	38
	F.	–	–	–	–	–	–	–	–
McGill University, Montreal, Que.	M.	74	70	17	126	5	–	28	320
	F.	8	1	–	1	–	–	30	40
University of Bishop's College, Lennoxville, Que.	M.	9	–	–	–	–	3	–	9
	F.	–	–	–	–	–	–	–	–
Laval University, Quebec, Que.	M.	45	–	20	28	4	11	142	250
	F.	–	–	–	–	–	–	15	15
University of Montreal, Montreal, Que.	M.	188	19	17	86	10	15	359	694
	F.	10	–	–	–	–	–	41	51
University of Toronto, Toronto, Ont.	M.	161	78	–	210	–	–	53	502
	F.	26	1	–	5	–	–	17	49
Victoria University, Toronto, Ont.	M.	23	–	–	–	–	11	–	32
	F.	2	–	–	–	–	–	–	2
University of Trinity College, Toronto, Ont.	M.	27	–	–	–	–	11	–	27
	F.	3	–	–	–	–	–	–	3
Western University, London, Ont.	M.	35	–	–	58	–	–	2	92
	F.	7	–	–	1	–	–	1	9
Queen's University, Kingston, Ont.	M.	64	61	–	47	–	5	–	102
	F.	10	–	–	–	–	–	–	10
University of Ottawa, Ottawa, Ont.	M.	28	–	–	–	–	8	65	101
	F.	–	–	–	–	–	–	85	85
McMaster University, Toronto Ont.	M.	14	–	–	–	–	8	–	22
	F.	–	–	–	–	–	–	–	–
University of Manitoba, Winnipeg, Man.	M.	48	15	16	50	1	–	8	144
	F.	9	–	–	–	–	–	–	9
University of Saskatchewan, Saskatoon, Sask.	M.	37	12	7	–	7	–	11	74
	F.	9	–	–	–	1	–	1	11
University of Alberta, Edmonton, Alta.	M.	44	28	20	33	11	6	4	118
	F.	5	2	–	2	–	–	–	9
University of British Columbia, Vancouver, B.C.	M.	–	–	–	–	–	–	–	96
	F.	–	–	–	–	–	–	–	14
Total	....	**1,023**	**318**	**123**	**689**	**39**	**90**	**943**	**3,142**[2]

[1] Totals are exclusive of persons teaching in more faculties than one.
[2] 2,830 males and 307 females.

14.—Universities of Canada: Number of Students

Name and Address of University.	Sex.	Courses leading to Matriculation and other Preparatory Courses.	Arts, Pure Science, Philosophy, etc.		Agriculture.	Architecture.	Banking.	Commerce.	Dentistry.	Education.	Engineering.	Applied Science, Unspecified.	Forestry.
			Undergraduate Courses.	Graduate Courses.									
St. Dunstan's University, Charlottetown, P.E.I.	M.	135	95	–	–	–	–	–	–	–	–	–	–
	F.	–	–	–	–	–	–	–	–	–	–	–	–
University of King's College, Windsor, N.S.	M.	–	91	–	–	–	–	–	–	–	–	–	–
	F.	–	22	–	–	–	–	–	–	–	–	–	–
Dalhousie University, Halifax, N.S.	M.	–	164	5	–	–	–	15	61	–	40	–	–
	F.	–	135	3	–	–	–	3	3	–	–	–	–
Acadia University, Wolfville, N.S.	M.	–	153	4	–	–	–	–	–	–	33	–	–
	F.	–	98	1	–	–	–	–	–	–	–	–	–
University of St. Francis Xavier, Antigonish, N.S.	M.	92	154	2	–	–	–	–	–	–	15	–	–
	F.	–	43	–	–	–	–	–	–	–	–	–	–
University of New Brunswick, Fredericton, N.B.	M.	–	41	–	–	–	–	–	–	–	66	–	23
	F.	–	34	–	–	–	–	–	–	–	–	–	–
University of Mt. Allison, Sackville, N.B.	M.	–	112	2	–	–	–	–	–	–	52	–	–
	F.	–	98	1	–	–	–	–	–	–	–	–	–
University of St. Joseph's College, St. Joseph, N.B.	M.	322	50	–	–	–	–	–	–	–	–	–	–
	F.	–	–	–	–	–	–	–	–	–	–	–	–
McGill University, Montreal, Que.	M.	–	338	50	65	25	–	196	115	10	638	–	–
	F.	–	230	18	2	–	–	1	–	48	–	–	–
University of Bishop's College, Lennoxville, Que.	M.	9	33	4	–	–	–	–	–	–	–	–	–
	F.	–	24	3	–	–	–	–	–	–	–	–	–
Laval University, Quebec, Que.....	M.	949	438	77	49	–	–	60	–	50	–	–	22
	F.	–	–	4	–	–	–	6	–	–	–	–	–
University of Montreal, Montreal, Que.	M.	1,693	1,129	181	70	16	–	262	203	23	103	–	–
	F.	503	47	152	–	–	–	–	–	7	–	–	–
University of Toronto, Toronto, Ont.	M.	–	1,342	131	–	–	–	–	–	213	820	–	62
	F.	–	1,112	47	–	–	–	–	–	140	1	–	–
Victoria University, Toronto, Ont..	M.	–	303	–	–	–	–	–	–	–	–	–	–
	F.	–	243	–	–	–	–	–	–	–	–	–	–
University of Trinity College, Toronto, Ont.	M.	–	80	17	–	–	–	–	–	–	–	–	–
	F.	–	65	2	–	–	–	–	–	–	–	–	–
Western University, London, Ont...	M.	16	210	1	–	–	–	–	–	–	–	–	–
	F.	1	199	1	–	–	–	–	–	–	–	–	–
Queen's University, Kingston, Ont..	M.	–	325	7	–	–	250	62	–	–	322	–	–
	F.	–	239	4	–	–	–	3	–	–	–	–	–
University of Ottawa, Ottawa, Ont.	M.	974	213	81	–	–	–	–	–	–	–	–	–
	F.	1,763	18	8	–	–	–	–	–	–	–	–	–
McMaster University, Toronto, Ont.	M.	–	147	39	–	–	–	–	–	–	–	–	–
	F.	–	84	5	–	–	–	–	–	–	–	–	–
University of Manitoba, Winnipeg, Man.	M.	–	604	28	–	9	–	230	–	–	129	–	–
	F.	–	455	12	–	–	–	10	–	–	–	–	–
University of Saskatchewan, Saskatoon, Sask.	M.	–	219	14	151	–	–	–	–	–	44	–	–
	F.	–	191	2	–	–	–	–	–	–	–	–	–
University of Alberta, Edmonton, Alta.	M.	–	264	49	88	2	–	15	39	–	56	–	–
	F.	–	196	19	1	–	–	3	–	–	–	–	–
University of British Columbia, Vancouver, B.C.	M.	–	354	20	64	–	–	–	–	–	195	–	–
	F.	–	339	18	5	–	–	–	–	–	2	–	–
Total by sex.....	M.	4,190	6,859	712	487	52	250	840	418	290	2,513	–	107
	F.	2,267	3,872	300	8	–	–	20	3	195	3	–	–
Grand total.....	—	**6,457**	**10,731**	**1,012**	**495**	**52**	**250**	**866**	**421**	**491**	**2,516**	**–**	**107**

[1]217 in British Columbia were not specified by sex.

[2]Exclusive of 371 men and 307 women in arts, pure science, etc., registered at Victoria and Trinity as well as at Toronto, with which Victoria and Trinity are in federation.

[3]Not included in the total registration reported by the university.

in the Various Faculties, 1921-22.

Household Science.	Law.	Medicine.	Music.	Nursing.	Pharmacy.	Social Service.	Theology.	Veterinary Medicine.	Short or Special Courses for Teachers.	Short or Special Courses other than Teachers.	Other Short Courses.	Correspondence.	Physical Education.	Unspecified.	Total, excluding Duplicates.			Number of these also registered in affiliated Colleges.
															Male.	Female.	Total.	
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	230	—	230	—
–	30	–	–	–	–	–	–	–	–	–	–	–	–	–	121	23	144	—
–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	546	174	720	—
–	77	159	–	–	25	–	–	–	–	–	–	–	–	–	206	101	307	—
–	–	13	5	8	4	–	16	–	–	–	–	–	–	–	171	43	214	—
–	10	10	–	–	–	–	2	–	–	–	–	–	–	–	133	35	168	—
–	–	–	–	–	–	–	–	–	–	–	–	–	–	3	166	99	265	—
–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	375	—	375	—
–	–	–	–	–	–	–	3	–	–	–	–	–	–	–	2,218	623	2,841	—
–	90	695	4	–	37	3	–	–	–	9	–	–	–	3	56	27	83	—
90	5	17	92	36	5	25	–	–	–	77	–	–	–	32	1,961	58	2,019	1,234
–	–	–	–	–	–	–	10	–	–	–	–	–	–	–	4,837	1,561	6,398	3,206
48	81	153	–	–	7	–	178	–	–	–	–	–	–	–	3,579	1,770	5,349	911
130	–	–	600	–	2	120	–	–	–	–	–	–	–	–	371	243	614	—
–	121	295	250	–	144	30	297	20	–	–	–	–	–	–	111	71	182	—
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	360	221	581	108
–	–	997	24	–	–	17	–	–	55	20	512[3]	70[3]	–	87	1,786	776	2,562	—
–	–	75	20	77	–	293	–	–	30	–	688[3]	81[3]	–	116	1,346	1,789	3,135	2,296
–	–	–	–	–	–	–	183	–	–	–	–	–	–	–	210	91	301	—
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,836	590	2,426	338
–	–	–	–	–	–	–	19	–	–	–	–	–	–	–	656	384	1,040	33
–	–	–	–	–	–	–	4	–	–	–	–	–	–	–	899	386	1,285	41
–	–	148	–	–	–	–	–	–	17	–	–	12	–	4	634	380	1,231	10
–	–	5	–	15	–	–	–	–	23	–	–	15	–	–				
–	–	259	–	–	–	–	26	–	156	–	–	615	–	–				
–	–	–	–	–	–	–	–	–	133	–	–	464	–	–				
–	–	–	–	–	–	–	78	–	–	–	–	–	–	–				
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–				
–	–	–	–	–	–	–	35	–	–	–	–	–	–	–				
–	–	–	–	–	–	–	5	–	–	–	–	–	–	–				
–	109	277	–	–	36	–	–	–	37	267	110	–	–	–				
–	2	30	–	50	2	–	–	–	29	–	–	–	–	40				
–	37	–	–	–	50	–	–	–	28	67	–	–	–	29				
8	1	–	–	–	7	–	–	–	101	45	–	–	–	–				
–	81	141	–	–	53	–	9	–	39	–	–	66	–	30				
26	8	14	–	10	9	–	–	–	35	–	–	57	–	–				
–	–	–	–	–	–	–	–	–	–	–	–	–	–	1				
–	–	–	–	16	–	–	–	–	–	–	217	–	–	–				
–	636	3,134	278	–	352	50	854	20	332	363	622	763	–	174	—	—	—	—
302	17	154	717	212	29	438	11	–	351	122	905	617	–	172	—	—	—	—
302	**653**	**3,288**	**995**	**212**	**381**	**488**	**865**	**20**	**683**	**485**	**1,527**	**1,380**	**–**	**340**	**22,437**	**9,138**	**31,792[2]**	**8,177**

15.—Universities of Canada: Number of Students by Academic Years and Number of Degrees Conferred, 1921-1922.

Universities.	Preparatory.	1st year.	2nd year.	3rd year.	4th year.	5th year.	6th year.	7th year.	Graduates.	All others	Total.
St. Dunstan's[1]	135	39	20	18	18	–	–	–	–	–	230
King's College	–	42	38	32	21	–	–	–	11	–	144
Dalhousie	Not given by academic years.										720
Acadia	–	97	79	54	56	5	–	–	–	16	307
St. Francis Xavier	–	–	–	–	85	61	32	19	2	15	214
New Brunswick	–	56	52	36	21	–	–	–	3	–	168
Mount Allison	–	67	56	40	32	–	–	–	3	67	265
St. Joseph's College[1]	322	10	16	11	13	–	–	–	3	–	375
McGill	–	881	634	700	384	110	–	–	68	64	2,841
Bishop's College	14	30	16	16	–	–	–	–	7	–	83
Laval	356	336	257	237	201	–	–	–	574	58	2,019
Montreal	3,258	292	280	294	310	891	454	343	–	276	6,398
Toronto	–	1,641	882	1,089	676	157	–	–	221	750	5,349
Victoria	Not given by academic years.										614
Trinity	–	50	32	41	21	–	–	–	15	23	182
Western	–	133	111	90	53	31	–	–	4	159	581
Queen's	11	99	148	194	94	44	–	–	1	1,971	2,562
Ottawa[1]	2,797	78	38	48	42	–	–	–	35	97	3,135
McMaster	–	54	56	43	40	–	–	–	44	64	301
Manitoba	–	664	444	299	134	26	–	–	40	819	2,426
Saskatchewan	–	–	–	–	–	–	–	–	20	1,020	1,040
Alberta	–	336	265	208	103	–	–	–	68	305	1,285
British Columbia	–	446	241	172	116	1	–	–	38	217	1,231
Total	**6,893**	**5,351**	**3,665**	**3,622**	**2,420**	**1,326**	**486**	**362**	**1,157**	**6,216**	**31,792**[2]

Universities.	Number of Degrees Conferred.		
	Undergraduate.	Graduate.	Total.
St. Dunstan's[1]	16	–	16
King's College	36	14	50
Dalhousie	100	10	110
Acadia	63	3	66
St. Francis Xavier	19	1	20
New Brunswick	21	1	22
Mount Allison	19	3	22
St. Joseph's College[1]	11	–	11
McGill	384	30	414
Bishop's College	15	4	19
Laval	289	89	378
Montreal	155	204	359
Toronto	1,052	113	1,165
Victoria	86	14	100
Trinity	30	3	33
Western	56	5	61
Queen's	237	12	249
Ottawa[1]	89	78	167
McMaster	49	5	54
Manitoba	192	20	212
Saskatchewan	94	9	103
Alberta	121	16	137
British Columbia	114	10	124
Total	**3,248**	**614**	**3,892**

[1]The 95 students given by years are taking the ordinary 4 undergraduate years leading to a degree in Arts, Letters and Philosophy, which are the 4th, 5th, 6th and 7th years of St. Dunstan's. The 135 given above as preparatory students include 20 in preparatory work in St. Dunstan's, 30—1st year, 40—2nd and 45 in 3rd year. The same arrangement of years applies to St. Joseph's and Ottawa.

[2]Excluding 678, registered at Trinity and Victoria as well as at Toronto.

16.—Universities of Canada: Financial Statistics, 1921-22.

ASSETS.

Name and Address.	Value of Endowments.	Value of Land and Buildings.	Value of Scientific Equipment.	Value of other Property.	Total Assets.
	$	$	$	$	$
St. Dunstan's University, Charlottetown, P.E.I.	40,000	240,000	12,000	30,000	322,000
University of King's College, Windsor, N.S.	206,486	200,000	25,000	–	431,486
Dalhousie University, Halifax, N.S.	1,251,020	1,995,000	75,000	120,000	3,441,020
Acadia University, Wolfville, N.S.	770,649	589,536	15,000	–	1,375,185
University of St. Francis Xavier, Antigonish, N.S.	262,919	425,699	5,000	58,210	751,828
University of New Brunswick, Fredericton, N.B.	20,000	250,000	50,000	100,000	420,000
Mt. Allison University, Sackville, N.B.	519,000	340,780	24,600	21,000	905,380
University of St. Joseph's College, St. Joseph, N.B.	–	337,744	6,500	36,000	380,244
McGill University, Montreal, Que. (1921)	13,791,412	7,688,012	856,179	–	22,335,603
University of Bishop's College, Lennoxville, Que.	394,454	261,619	664	11,141	667,878
University of Laval, Quebec, Que. (1921)	–	–	–	–	–
University of Montreal, Montreal, Que.	1,400,000	1,800,000	260,000	–	3,460,000
University of Toronto, Toronto, Ont	–	–	–	–	8,740,002
Victoria University, Toronto, Ont.	1,090,472	1,185,699	–	54,864	2,331,035
University of Trinity College, Toronto, Ont.	1,049,814	10,049	34,848	–	1,094,711
Queen's University, Kingston, Ont.	2,286,689	2,754,585	238,100	–	5,279,374
Western University, London, Ont. (1921)	–	500,000	–	–	–
University of Ottawa, Ottawa, Ont.	–	851,300	–	–	851,300
McMaster University, Toronto, Ont.	1,022,159	466,829	20,267	–	1,509,255
University of Manitoba, Winnipeg, Man.	1,600,000	2,000,000	–	–	3,600,000
University of Saskatchewan, Saskatoon, Sask.	75,112	2,767,034	–	8,400	2,850,546
University of Alberta, Edmonton, Alta.	–	4,500,138	448,706	153,113	5,101,957
University of British Columbia, Vancouver, B.C.	30,050	388,771	188,542	148,457	755,820
Total Universities	**25,810,236**	**29,552,795**	**2,260,406**	**741,185**	**66,604,624**[1]

[1]Including $8,740,002 unclassified by the University of Toronto, but not including $500,000, value of lands and buildings at Western University.

INCOME AND EXPENDITURE.

Name and Address.	Income from					Expenditure.		
	Investments.	Government and Municipal Grants.	Fees.	Other Sources.	Total Income.	Current.	Capital.	Total.
	$	$	$	$	$	$	$	$
St. Dunstan's University, Charlottetown, P.E.I.	2,454	–	43,586	8,406	54,446	54,466	4,239	58,705
University of King's College, Windsor, N.S.	9,886	–	28,826	16,665	55,377	52,311	–	52,311
Dalhousie University, Halifax, N.S.	58,405	1,200	94,854	12,244	166,703	177,486	632,778	810,264
Acadia University, Wolfville, N.S.	41,220	–	28,838	24,406	97,464	92,423	16,754	109,177
University of St Francis Xavier, Antigonish, N.S.	12,045	–	62,838	67,428	142,311	92,452	39,720	132,172
University of New Brunswick, Fredericton, N.B.	2,544	25,000	11,637	300	39,481	41,495	–	41,495
Mt. Allison University, Sackville, N.B.	28,917	5,331	19,944	40,262	94,454	–	–	86,201
University of St Joseph's College, St. Joseph, N.B.	–	–	80,652	14,802	95,454	74,923	6,928	81,851
McGill University, Montreal, Que.	734,369	45,105	464,015	133,511	1,377,000	1,315,220	7,367	1,322,587

16.—Universities of Canada: Financial Statistics, 1921-22—concluded.

INCOME AND EXPENDITURE—concluded.

Name and address.	Income from					Expenditure.		
	Investments.	Government and Municipal Grants.	Fees.	Other Sources.	Total Income.	Current.	Capital.	Total.
	$	$	$	$	$	$	$	$
University of Bishop's College, Lennoxville, Que.	19,311	2,500	18,917	3,011	43,739	51,487	–	51,487
University of Laval, Quebec, Que.	–	38,000	27,470	–	65,470	–	–	75,420
University of Montreal, Montreal, Que.	96,779	43,300	149,957	25,000	315,036	304,102	60,000	364,102
University of Toronto, Toronto, Ont.	62,008	1,887,000[1]	363,462	102,075	2,414,545	1,805,545	277,277	2,082,822
Victoria University, Toronto, Ont.	95,220	–	19,895	30,218	145,333	157,056	–	157,056
University of Trinity College, Toronto, Ont.	69,621	–	35,165	3,481	108,267	107,268	–	107,268
Queen's University, Kingston, Ont.	106,755	211,000	158,824	12,313	488,892	486,974	–	486,974
Western University, London, Ont.	–	139,000	23,000	491,000	653,000	203,000	450,000	653,000
University of Ottawa, Ottawa, Ont.	–	–	103,764	55,956	159,720	145,324	–	145,324
McMaster University, Toronto, Ont.	53,503	–	32,738	–	86,241	73,627	–	73,627
University of Manitoba, Winnipeg, Man.	76,560	705,380	103,905	4,395	890,240	511,591	209,560	721,151
University of Saskatchewan, Saskatoon, Sask.	1,306	506,975	25,431	3,143	536,855	516,970	288,177	805,147
University of Alberta, Edmonton, Alta (1919)	–	427,825	51,560	541,970	1,021,355	1,026,119	450,000	1,476,119
University of British Columbia, Vancouver, B.C. (1920)	1,725	489,500	44,798	22,424	558,447	501,185	48,590	549,775
Total Universities	**1,475,628**	**4,527,116**	**1,994,076**	**1,613,010**	**9,609,830**	**7,791,024**	**2,491,390**	**10,444,035[2]**

[1]Including $1,380,000 special legislative grant.
[2]Including $161,621 unclassified.

17.—Colleges of Canada: Foundation, Affiliation, Faculties and Degrees.

Name and Address.	Date of		University Affiliation.	Faculties.	Degrees.
	Original Foundation.	Present Charter.			
Prince of Wales College, Charlottetown, P.E.I.	1836	1860	Practically all Canadian Universities.	Arts.	—
Presbyterian College, Halifax, N.S.	1820	—	Dalhousie.	Theology.	D.D., B.D.
College of Saint Anne, Church Point, N.S.	1890	1892	—	Arts, Science.	B.A., B.Sc., M.A.
Technical College, Halifax, N.S.	1907	—	Acadia, King's, St. Mary's, Dalhousie, Mt. Allison, St. Francis Xavier.	Engineering.	B. Sc. in M.E., C. E., E.E., Mch. E.
Agricultural College, Truro, N.S.	1888	1905	—	Agriculture.	Associate Diploma.
Holy Heart Theological College, Halifax, N.S.	1894	1906	—	Theology, Philosophy.	T.B., T.L., D.D., Ph. D.
St. Mary's College, Halifax, N.S.	1841	1841	—	Arts, Partial Course in Engineering.	B.A.
Macdonald College, Ste. Anne de Bellevue, Que.	1907	—	McGill.	Agriculture, Household Science.	M.S.A., B.H.S., B.S.A., B. Sc. in Agr.

17.—Colleges of Canada: Foundation, Affiliation, Faculties and Degrees—con.

Name and Address.	Date of Original Foundation.	Date of Present Charter.	University Affiliation.	Faculties.	Degrees.
Ecole Des Hautes Etudes Commerciales, Montreal, Que.	1907	1907	Laval.	Commerce.	L.S.C., C.L.
Stanstead Wesleyan College, Stanstead, Que.	1872	1872	—	Arts, Commercial, Music.	Diploma.
Presbyterian College, Montreal, Que.	1865	1865	McGill.	Theology.	B.D., D.D.
Congregational College of Canada, Montreal, Que.	1839	Amended 1864 & 1889	McGill.	Theology.	B.D., D.D.
Montreal Diocesan Theological College, Montreal, Que.	1873	1879	McGill.	Divinity.	B.D., D.D.
Wesleyan Theological College, Montreal, Que.	1872	1879	McGill.	Theology.	B.D., S.T.D., D.D.
Wycliffe College, Toronto, Ont.	1879	1916	Toronto.	Theology.	L. Th., B.D., D.D.
Knox College, Toronto, Ont.	1843	1858	Toronto.	Theology.	B.D., D.D.
St. Michael's College, Toronto, Ont.	1852	—	Toronto.	Arts.	B.A., M.A., Ph. D.[1]
Ontario Agricultural College, Guelph, Ont.	1874	1874	Toronto.	Agriculture, Domestic Science, Manual Training.	B.S.A.
Ontario College of Art[2], Toronto, Ont.	1912	1912	—	—	Diploma.
Ontario Law School, Osgoode Hall, Toronto, Ont.	—	—	—	—	—
Toronto Bible College, Toronto, Ont.	—	—	—	—	—
Ontario College of Pharmacy, Toronto, Ont.	1871	1884	Toronto.	Pharmacy.	Phm. B.[3]
Royal College of Dental Surgeons of Ontario, Toronto, Ont.	1868	1911	Toronto.	Dentistry.	L.D.S.[4]
Ontario Veterinary College, Guelph, Ont.	1862	Taken over by Government in 1908	Toronto.	Veterinary.	V.S.[5]
Waterloo College, Lutheran Theological Seminary, Waterloo, Ont.	1911	1912	—	Arts, Theology.	B.A., M.A.
Huron College, London, Ont.	1863	1863	Western University.	Theology.	Diploma with title L. Th.[6]
St. Jerome's College, Kitchener, Ont.	1864	1866	—	Arts, Scholastic Philosophy.	—
Royal Military College, Kingston, Ont.	1875	—	—	—	Diploma and Diploma with Honours.
Brandon College, Brandon, Man.	1899	—	McMaster.	Arts, Theology, Academic, Business, Music.	B.A. by McMaster University.
The Manitoba Law School, Winnipeg, Man.	1914	—	Manitoba.	Law.	LL. B. by University.
Wesley College, Winnipeg, Man.	1877	1877	Manitoba.	Arts, Theology, Matriculation.	B.D., D.D.[7]
Manitoba College, Winnipeg, Man.	1871	—	Manitoba.	Theology.	B.D.
Manitoba Agricultural College, Winnipeg, Man.	1903	—	Manitoba.	Agriculture, Home Economics.	B.S.A.
St. John's College, Winnipeg, Man.	1866	—	Manitoba.	—	B.D.
Emmanuel College, Saskatoon, Sask.	1879	1883	Saskatchewan.	Divinity.	L.Th., B.D., D.D.
Presbyterian Theological College, Saskatoon, Sask.	1911	—	Saskatchewan.	Divinity.	B.D., D.D.

NOTE.—For footnotes see page 900

17.—Colleges of Canada: Foundation, Affiliation, Faculties and Degrees—concluded.

Name and Address.	Date of Original Foundation.	Date of Present Charter.	University Affiliation.	Faculties.	Degrees.
St. Chad's College, Regina, Sask.	1907	—	Saskatchewan.	Divinity.	—
Edmonton Jesuit College, Edmonton, Alberta.	1913	1913	Laval.	Preparatory, Commercial, Classical.	—
Robertson College, Edmonton (South), Alberta.	1910	1916	Alberta.	Theology.	D.D.
Institute of Technology and Art, Calgary, Alberta.	1916	—	—	Technical Courses.	—
The Anglican Theological College, Vancouver, B.C.	—	—	—	—	—
Columbian Methodist College, New Westminster, B.C.	1892	1893	Toronto.	Academic, Music, Business.	Diplomas.
Royal Naval College, Esquimalt, B.C.	1911	—	—	—	Midshipman, R.C.N.
Victoria College, Victoria, B.C.	—	—	British Columbia.	Arts and pure Science.	—

[1]Degrees conferred by the University of Toronto. [2]Succeeding Ontario School of Art founded in 1876. [3]The University of Toronto grants the degree Phm. B. [4]The degree of D.D.S. is conferred by the University of Toronto. [5]The degrees of B.V. Sc. and D.V.Sc. are conferred by the University of Toronto. [6]Degrees in Arts and Theology are conferred by the Western University. [7]The degree of B.A. is conferred by the University of Manitoba.

NOTE.—In addition to the above colleges there are 21 classical colleges and 2 agricultural colleges in the province of Quebec. The classical colleges, with the dates of their foundation, are as follows: Chicoutimi (1873), Joliette (1846), L'Assomption (1832), Lévis (1853), Mont Laurier (1910), Montreal (Loyola) (1896), Montreal (Ste. Marie) (1848), Montreal (St. Sulpice) (1767), Nicolet (1803), Quebec Petit Séminaire (1663), Rigaud (1851), Rimouski (1855), St. Alexandre de la Gatineau (1911), Ste Anne de la Pocatière (1827), St. Hyacinthe (1811), St. Jean (1911), St. Laurent (1847), Ste. Thérèse (1825), Sherbrooke (1875), Trois Rivières (1860), and Valleyfield (1893). The two agricultural colleges are the Institut d'Oka and the agricultural school at Ste. Anne de la Pocatière. Of the 9,321 pupils in the classical colleges in 1922, 706 were in primary courses, 2,585 in commercial courses and 6,030 in classical courses. Of the last mentioned 269 were in colleges affiliated or annexed and 123 in colleges associated with Laval University. These were evidently doing work of university grade.

18.—Professional and Affiliated Colleges of Canada: Number of Teaching Staff and Students, 1921-22.

Name and Address.	Number of Teaching Staff.			Number of Students.		
	Male.	Female.	Total.	Male.	Female.	Total.
Prince of Wales College, Charlottetown, P.E.I. (1921)	7	3	10	74	158	232
Presbyterian College, Halifax, N.S.	4	–	4	36	–	36
College of Ste. Anne, Church Point, N.S.	15	–	15	140	–	140
Technical College, Halifax, N.S.	40	–	40	217	38	255[1]
Agricultural College, Truro, N.S.	15	2	17	205	208	413
Holy Heart Theological College, Halifax, N.S.	7	–	7	90	–	90
St. Mary's College, Halifax, N.S.	12	–	12	220	–	220
Macdonald College, Ste. Anne de Bellevue, Que.	42	19	61	438	353	791

[1]Exclusive of 94 male, 42 female instructors and 2,570 students accounted for under "Vocational".

18.—Professional and Affiliated Colleges of Canada: Number of Teaching Staff and Students, by Sex, 1921-22—concluded.

Name and Address.	Number of Teaching Staff.			Number of Students.		
	Male.	Female.	Total.	Male.	Female.	Total.
Ecole des Hautes Etudes Commerciales, Montreal, Que.	31	–	31	270	7	277
Presbyterian College, Montreal, Que.	7	–	7	60	–	60
Congregational College of Canada, Montreal, Que.	4	–	4	16	–	16
Montreal Diocesan Theological College, Montreal, Que.	6	–	6	26	–	26
Wesleyan Theological College, Montreal, Que.	4	–	4	128	–	128
Chicoutimi Classical College.	45	–	45	599	–	599
Joliette Classical College.	42	–	42	392	–	392
L'Assomption Classical College.	42	–	42	384	–	384
Lévis Classical College.	53	–	53	755	–	755
Mont Laurier Classical College.	18	–	18	146	–	146
Montreal (Loyola) Classical College.	29	–	29	386	–	386
Montreal (Ste. Marie) Classical College.	41	–	41	671	–	671
Montreal (St. Sulpice) Classical College.	25	–	25	375	–	375
Nicolet Classical College.	51	–	51	343	–	343
Quebec (Petit Sém.) Classical College.	58	–	58	794	–	794
Rigaud Classical College.	35	–	35	309	–	309
Rimouski Classical College.	35	–	35	300	–	300
St. Alexandre de la Gatineau Classical College.	15	–	15	195	–	195
Ste. Anne de la Pocatière Classical College.	49	–	49	589	–	589
St. Hyacinthe Classical College.	39	–	39	493	–	493
St. Jean Classical College.	31	–	31	278	–	278
St. Laurent Classical College.	54	–	54	568	–	568
Ste. Thérèse Classical College.	40	–	40	415	–	415
Sherbrooke Classical College.	50	–	50	542	–	542
Trois Rivières Classical College.	43	–	43	507	–	507
Valleyfield Classical School.	35	–	35	280	–	280
Oka Agricultural School.	18	–	18	92	–	92
Ste. Anne de la Pocatière Agricultural School.	17	–	17	94	–	94
Wycliffe College, Toronto, Ont. (1921).	11	1	12	59	–	59
Knox College, Toronto, Ont.	8	–	8	108	107	215
St Michael's College, Toronto, Ont.	24	13	37	402	104	506
Ontario Agricultural College, Guelph, Ont.	77	10	87	1,012	582	1,594
Ontario College of Art, Toronto, Ont.	13	8	21	238	381	619
Ontario College of Pharmacy, Toronto, Ont.	4	–	4	122	22	144
Ontario Law School, Osgoode Hall, Toronto, Ont.	7	–	7	324	15	339
Toronto Bible College, Toronto, Ont.	6	1	7	65	103	168
Royal College of Dental Surgeons, Toronto, Ont.	–	–	–	822	15	837
Ontario Veterinary College, Guelph, Ont.	10	–	10	83	–	83
Waterloo College, Lutheran Theological Seminary, Waterloo, Ont.	7	–	7	76	–	76
Huron College, London, Ont.	4	–	4	23	–	23
St. Jerome's College, Kitchener, Ont.	10	–	10	200	–	200
Royal Military College, Kingston, Ont.	25	–	25	155	–	155
Brandon College, Brandon, Man.	13	8	21	140	199	339
Manitoba Law School, Winnipeg, Man.	16	–	16	112	2	114
Wesley College, Winnipeg, Man.	14	3	17	193	120	313
Manitoba College, Winnipeg, Man.	5	1	6	14	15	29
Manitoba Agricultural College, Winnipeg, Man.	45	10	55	447	392	839
Emmanuel College, Saskatoon, Sask.	1	–	1	29	–	29
Presbyterian Theological College, Saskatoon, Sask.	4	–	4	52	3	55
St. Chad's College, Regina, Sask.	2	–	2	5	1	6
Alberta College, Edmonton (South), Alberta.	10	2	12	98	33	131
Edmonton Jesuit College, Edmonton, Alberta.	19	–	19	159	–	159
Robertson College, Edmonton (South), Alberta.	2	–	2	17	–	17
Institute of Technology and Art, Calgary, Alberta.	19	–	19	657	–	657
The Anglican Theological College of B.C., Vancouver, B.C.	4	–	4	18	–	18
Columbian Methodist College, New Westminster, B.C.	9	11	20	60	111	171
Total	**1,428**	**92**	**1,520**	**17,117**	**2,969**	**20,086**

19.—Colleges of Canada;

No.	Name and Address.	Assets.			
		Value of Endowment.	Value of Land and Buildings.	Value of Scientific Equipment.	Value of other Property.
		$	$	$	$
1	Prince of Wales College, Charlottetown, P.E.I. (1921)	–	450,000	2,000	–
2	Presbyterian College, Halifax, N.S.	–	–	–	Not given
3	College of Ste. Anne, Church Point, N.S.	–	–	1,000	–
4	Technical College, Halifax, N.S.	–	246,000	210,000	–
5	Agricultural College, Truro, N.S.	–	400,000	25,000	–
6	Holy Heart Theological College, Halifax, N.S.	–	–	–	–
7	St. Mary's College, Halifax, N.S.	–	155,000	3,000	–
8	Macdonald College, Ste. Anne de Bellevue, Que.	4,000,000	3,500,000	250,000	–
9	Ecoles des Hautes Etudes Commerciales, Montreal, Que.	–	652,140	33,282	–
10	Presbyterian College, Montreal, Que.	37,410	170,000	10,000	–
11	Montreal Diocesan Theological College, Montreal, Que.	191,594	104,649	–	9,556
12	Congregational College of Canada, Montreal, Que.	139,105	85,000	–	–
13	Wesleyan Theological College, Montreal, Que. (1921)	129,552	300,000	–	–
14	Wycliffe College, Toronto, Ont. (1921)	291,245	224,814	–	27,394
15	Knox College, Toronto, Ont.	461,532	–	–	700,000
16	St. Michael's College, Toronto, Ont.	–	–	–	Not given
17	Ontario Agricultural College, Guelph, Ont.	–	2,000,000	–	–
18	Ontario College of Art, Toronto, Ont.	–	124,781	–	–
19	Ontario College of Pharmacy, Toronto, Ont.	14,580	50,400	10,250	12,500
20	Ontario Law School, Toronto, Ont.	–	–	–	–
21	Toronto Bible College, Toronto, Ont.	–	–	–	–
22	Royal College of Dental Surgeons of Ontario, Toronto, Ont.	–	375,000	100,000	–
23	Ontario Veterinary College, Guelph, Ont.	–	350,000	10,000	–
24	Waterloo College, Lutheran Theological Seminary, Waterloo, Ont.	–	65,000	1,000	2,000
25	Huron College, London, Ont.	85,892	44,343	–	–
26	St. Jerome's College, Kitchener, Ont.	40,000	200,000	–	–
27	Royal Military College, Kingston, Ont.	–	–	–	–
28	Brandon College, Brandon, Man.	108,834	173,700	–	71,904
29	The Manitoba Law School, Winnipeg, Man.	–	–	–	–
30	Wesley College, Winnipeg, Man.	299,478	725,790	1,000	–
31	Manitoba College, Winnipeg, Man.	200,122	400,000	–	30,000
32	Manitoba Agricultural College, Winnipeg, Man.	–	–	–	–
33	Emmanuel College, Saskatoon, Sask.	6,319	70,791	–	–
34	Presbyterian Theological College, Saskatoon, Sask.	–	175,000	–	–
35	St. Chad's College, Regina, Sask.	7,385	135,000	–	–
36	Alberta College Edmonton (South), Alta.	3,000	175,000	2,000	–
37	Edmonton Jesuit College, Edmonton, Alberta.	–	180,000	1,000	14,000
38	Robertson College, Edmonton (South)), Alberta.	40,064	19,632	4,716	3,608
39	Institute of Technology and Art, Calgary, Alta. (1921)	–	93,575	56,519	1,556
40	Anglican Theological College of B.C., Vancouver, B.C.	22,375	–	–	53,537
41	Columbian Methodist College, New Westminster, B.C.	10,000	–	135,841	–
	Total	**6,088,487**	**11,645,615**	**856,608**	**926,055**

Financial Statistics, 1921-22.

Total Value of Property.	Income.					Expenditure.			No.
	Investments.	Government Grants.	Fees.	Other Sources.	Total Income.	Current.	Capital.	Total.	
$	$	$	$	$	$	$	$	$	
452,000	–	25,000	1,400	–	26,400	22,000	3,000	25,000	1
–	–	–	–	–	–	–	–	–	2
–	–	–	20,000	–	20,000	18,000	2,000	20,000	3
456,000	–	124,985	8,504	–	133,489	133,489	15,907	149,396	4
425,000	–	73,338	–	–	73,338	56,566	4,951	61,517[1]	5
–	–	–	20,250	–	20,250	–	–	26,300	6
158,000	500	–	23,000	5,000	28,500	27,000	6,000	33,000	7
7,750,000	216,000	10,904	21,740	189,490	438,134	426,134	12,000	438,134	8
685,422	–	65,000	9,794	21,799	96,593	82,908	–	82,908	9
217,410	23,721	–	–	6,636	30,357	23,135	8,248	31,383	10
305,799	10,890	–	8,832	6,095	25,817	25,748	–	25,748	11
224,105	7,914	–	–	8,193	16,107	13,418	–	13,418	12
429,552	6,482	–	307	18,000	24,789	25,317	–	25,317	13
543,453	18,401	–	150	64,386	82,937	67,281	14,506	81,787	14
1,161,532	27,354	–	116	18,883	46,353	51,808	–	51,808	15
–	–	–	–	–	–	–	–	–	16
2,000,000	–	–	–	–	–	–	–	329,110	17
124,781	–	25,000	9,630	366	34,996	–	–	30,818	18
87,730	557	–	40,800	6,286	47,643	35,230	–	35,230	19
–	–	–	71,014	–	71,014	23,930	–	23,930	20
–	2,178	–	1,500	14,614	18,292	16,335	2,300	18,635	21
475,000	–	13,029	142,929	142,880	298,838	264,897	33,941	298,838	22
360,000	–	49,000	7,500	–	56,500	48,000	–	48,000	23
68,000	–	–	3,585	14,000	17,585	18,000	–	18,000	24
130,235	7,746	–	3,316	5,310	16,372	13,967	–	13,967	25
240,000	2,000	–	50,000	–	52,000	40,000	–	40,000	26
–	–	–	–	–	–	–	–	463,212	27
354,438	8,674	–	20,445	126,778	155,897	91,531	70,624	162,155	28
–	–	–	7,248	6,794	14,042	–	–	14,700	29
1,026,268	18,933	–	15,103	29,020	63,056	81,958	–	81,958	30
630,122	9,939	–	19	34,606	44,564	44,564	–	44,564	31
4,000,000	–	133,392	–	89,100	222,492	222,492	–	222,492	32
77,110	747	–	–	19,957	20,704	19,794	–	19,794	33
175,000	–	–	200	13,821	14,021	14,021	–	14,021	34
142,385	627	–	2,218	4,272	7,117	–	–	–	35
180,000	–	–	8,200	28,400	36,600	33,100	4,000	37,100	36
195,000	–	–	38,169	5,266	43,435	41,715	–	41,715	37
68,020	1,965	–	–	11,941	13,906	11,891	–	11,891	38
151,650	–	–	1,540	–	1,540	9,939	75,625	85,564	39
75,912	3,667	–	1,435	6,787	11,889	11,566	–	11,566	40
145,841	609	1,311	36,198	11,960	50,078	42,949	5,100	48,049	41
23,515,765[2]	**368,904**	**520,959**	**575,142**	**910,640**	**2,375,645**	**2,058,683**	**258,202**	**3,181,025[3]**	

[1]Net expenditure after receipts from farm to the amount of $16,772, forwarded to the government, were deducted.

[2]Including $4,000,000 unclassified by Manitoba Agricultural College, but not including $1,000 value of scientific equipment at the College of Ste. Anne.

[3]Including $864,140 unclassified.

XIII.—ADMINISTRATION.

This Administration section includes sub-sections on most of the important governmental activities which are not covered in the preceding sections. Commencing with a sub-section on the public lands of Canada, Dominion and provincial, it continues with a treatment of public defence, followed by a survey, appearing for the first time, of public health and public benevolence in Canada, and a *résumé* of the activities of the Dominion Department of Public Works, including the Harbour Commissions. Next comes an article on the Indians of Canada and their relations with the Department of Indian Affairs; to this, statistical tables of Indian population, etc., are appended. The establishment and operation of the Department of Soldiers' Civil Re-establishment, including the Board of Pension Commissioners, is described in the following sub-section. The final sub-section, Miscellaneous Administration, includes several articles dealing with the Soldier Settlement Board, scientific and industrial research in Canada, the Department of the Secretary of State (including tables of naturalizations in Canada from 1916 to 1922 and of companies incorporated since 1900), the National Gallery, the Royal Canadian Mounted Police, the Civil Service of Canada, and judicial and penitentiary statistics. It closes with a treatment of divorce in Canada, illustrated by statistics of the years from 1901 to 1922.

I.—PUBLIC LANDS.

1.—Dominion Public Lands.

The Crown lands of the Dominion of Canada are situated (*a*) in the Prairie Provinces (Manitoba, Saskatchewan and Alberta), (*b*) in the belt of twenty miles on either side of the main line of the Canadian Pacific Railway, known as the Dominion Railway Belt of British Columbia, and (*c*) in a block in northern British Columbia, containing 3,500,000 acres, known as the "Peace River block". Every person who is the sole head of a family and every male who has attained the age of eighteen years and is a British subject, or declares his intention to become a British subject, is entitled to apply for entry for a homestead. The lands are laid out in townships of 36 sections. Each section contains 640 acres and is divided into quarter-sections of 160 acres. A quarter-section of 160 acres may be obtained as a homestead on payment of an entry fee of $10 and fulfilment of certain conditions of residence and cultivation. To qualify for the issue of the patent, a settler must have resided upon his homestead for at least six months in each of three years, must have erected a habitable house thereon, and must have at least 30 acres of his holding broken, of which 20 acres must be cropped. A reduction may be made in the area of breaking where the land is difficult to cultivate on account of scrub or stone. Provision is made on certain conditions, for residence in the vicinity, in which case the area of cultivation must be increased.

Lands in Saskatchewan and Alberta, south of township 16, are not open for homestead entry, but may be secured under grazing lease.

Disposal of Dominion Lands in Manitoba, Saskatchewan and Alberta.—According to figures supplied by the Department of the Interior, a total of 127,764,590 acres, equal to 5,546 townships or 199,632 square miles, has been disposed of. The total number of acres within the surveyed area at Jan. 1, 1923, was 200,492,790, of which 26,307,900 were available for homestead entry. Table 1 shows the distribution of the surveyed area for each of the three Prairie Provinces

as at Jan. 1, 1923. In addition to the surveyed area there are large tracts of land in the northern part of these provinces, which have as yet been only very partially explored. The total area of this unsurveyed tract is 285,150,090 acres, of which 22,379,120 acres are water-covered.

Maps showing the disposition of Dominion lands and lands available for entry, and reports on the resources and development of Manitoba, Saskatchewan and Alberta have been issued by the Natural Resources Intelligence Service of the Department of the Interior, some of which are as follows: Land Maps of Manitoba, Saskatchewan, Southern and Northern Alberta respectively, small Land Map of the Prairie Provinces, Cereal Map of the Prairie Provinces, the Peace River District of Alberta, Description of the Resources and Possibilities of the Province of Saskatchewan, Statistical Compilation on the Natural Resources of Manitoba, Saskatchewan and Alberta, Athabasca to the Bay, etc. Similar reports have been issued with regard to other parts of Canada such as: Natural Resources of Nova Scotia, the Province of New Brunswick, and Central British Columbia. With the object of assisting in the settlement and development of the idle lands in Canada, this Service also publishes lists of unoccupied lands in the Prairie and Maritime provinces, giving a short description of the properties, the prices and terms of sale or lease and the owners' names and addresses, thus giving prospective landseekers an opportunity of selecting lands suitable to their means and requirements, and affording them an easy means of getting in direct touch with the owners thereof.

1.—Disposition of the Surveyed Areas in Manitoba, Saskatchewan and Alberta, Jan. 1, 1923.

Surveyed Area.	Manitoba.	Saskatchewan.	Alberta.	Total.
	acres.	acres.	acres.	acres.
Under homestead (including military homesteads)	8,269,400	27,616,100	18,278,600	54,164,100
Under pre-emption, purchased homesteads, sales, half-breed scrip, bounty grants, special grants, etc.	5,111,100	7,663,300	3,864,100	16,638,500
Granted to railway companies	3,566,997	15,177,063	13,120,014	31,864,074
Granted to Hudson's Bay Company	1,196,800	3,183,600	2,175,900	6,556,300
School land endowment (1/18 of area surveyed in sections)	1,637,700	3,942,000	3,755,700	9,335,400
Sold subject to reclamation by drainage	–	267	34,083	34,350
Sold under irrigation system	–	76,832	981,853	1,058,685
Under timber berths	872,600	740,900	1,445,200	3,058,700
Under grazing leases	131,700	2,898,700	2,850,200	5,880,600
Forest reserves and parks	2,386,700	5,964,300	16,802,300	25,153,300
Reserved for forestry purposes (inside surveyed tract)	746,300	1,430,000	1,677,500	3,853,800
Road allowances	977,132	1,467,500	1,287,200	3,731,832
Parish and river lots	505,211	84,010	118,564	707,785
Indian reserves	434,301	1,071,136	1,367,707	2,873,144
Indian reserves surrendered	87,560	410,365	302,495	800,420
Water-covered lands (inside surveyed tract)	4,260,500	1,911,200	2,302,200	8,473,900
Available for entry	5,516,800	5,390,700	15,400,400	26,307,900
Total within surveyed area	**35,700,801**	**79,027,973**	**85,764,016**	**200,492,790**

Homestead Entries.—In the calendar year 1922 the total number of homestead entries was 5,318. Table 2 is a statement of the homestead entries on Dominion lands for the years 1915 to 1922. Statistics of the origin of those making homestead entries in the fiscal years ended 1917 to 1922 are given in Table 3, and financial statistics of receipts from Dominion lands in Table 4.

The privilege of making pre-emptions or purchased homestead entries was withdrawn by Order in Council, from March 20, 1918, confirmed by chapter 19 of the Statutes of 1918, assented to May 24, 1918.

2.—Homestead Entries on Dominion Lands in Manitoba, Saskatchewan, Alberta and British Columbia.

Provinces.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
	No.	No.	No.	No.	No.	No.	No.	No.
Manitoba	4,113	2,616	1,617	873	1,209	795	1,477	878
Saskatchewan	6,349	4,519	2,967	1,273	1,840	1,726	2,729	2,046
Alberta	6,584	5,169	3,975	2,163	3,464	2,794	2,936	2,240
British Columbia	486	264	209	69	110	120	204	154
Total	**17,532**	**12,568**	**8,768**	**4,378**	**6,623**	**5,435**	**7,346**	**5,318**

3.—Homestead Entries made in Manitoba, Saskatchewan, Alberta and British Columbia, by Nationalities, during the fiscal years 1917-1922.

Nationalities.	1917.	1918.	1919.	1920.	1921.	1922.
	No.	No.	No.	No.	No.	No.
Canadians from Ontario	1,500	1,179	599	937	665	786
" Quebec	496	425	260	298	270	318
" Nova Scotia	124	138	53	106	78	83
" New Brunswick	70	87	31	83	52	54
" Prince Edward Island	51	49	17	47	37	47
" Manitoba	657	403	238	365	237	398
" Saskatchewan	284	177	75	126	105	201
" Alberta	233	158	87	144	134	220
" British Columbia	68	47	28	37	27	55
Persons who had previous entry	1,642	1,087	606	875	871	946
Newfoundlanders	4	8	2	10	8	4
Canadians returned from the United States	17	10	6	13	3	3
Americans	1,734	2,084	870	1,318	1,072	1,505
English	1,469	888	639	1,252	821	762
Scotch	496	285	182	360	242	229
Irish	194	142	87	154	114	92
French	65	54	38	58	32	63
Belgians	46	39	19	26	36	37
Swiss	30	24	8	13	18	17
Italians	48	25	21	12	19	22
Rumanians	24	19	7	10	12	48
Syrians	5	2	1	4	1	2
Germans	75	10	7	5	22	40
Austro-Hungarians	735	125	38	69	170	712
Dutch	41	42	15	13	9	23
Danes (other than Icelanders)	57	46	29	35	46	44
Icelanders	36	38	10	20	14	19
Swedes	235	195	60	82	71	173
Norwegians	226	248	83	92	84	159
Russians (other than Finns)	489	217	74	105	91	168
Finns	–	–	–	–	–	40
Chinese	–	1	4	1	–	2
Japanese	3	2	2	–	–	–
Persians	–	2	–	–	–	–
Australians	10	6	1	5	2	2
New Zealanders	–	2	–	1	1	3
Greeks	1	–	1	1	2	3
Hindus	3	–	–	–	–	–
Poles	–	–	–	–	–	65
Bulgarians	2	4	–	–	–	–
Serbians	2	2	1	4	–	–
Spaniards	3	1	–	–	–	–
South Americans	–	–	–	–	–	2
Hebrews	–	2	–	–	–	–
South Africans	–	–	–	–	–	1
Armenians	–	–	–	–	–	1
Other nationalities	24	46	28	51	23	–
Total	**11,199**	**8,319**	**4,227**	**6,732**	**5,389**	**7,349**

4.—Receipts from Patents and Homestead Entries in the fiscal years 1917-1922.

Sources of Receipts.	1917.	1918.	1919.	1920.	1921.	1922.
	$	$	$	$	$	$
Homestead fees	112,110	83,180	42,190	67,460	53,880	73,540
Cash sales	2,707,204	3,046,092	2,192,861	2,799,605	1,721,172	761,850
Scrip sales	333	131	323	80	–	–
Timber dues	429,403	482,006	408,728	589,780	705,314	683,491
Hay permits, mining, stone quarries, etc., cash	600,934	630,473	630,976	896,414	1,234,558	1,071,396
All other receipts	340,254	315,928	341,204	385,582	371,152	328,253
Gross revenue	4,190,238	4,557,810	3,616,282	4,738,921	4,086,076	2,918,530
Refunds	134,243	113,680	76,031	116,249	130,751	119,080
Net revenue	4,055,995	4,444,130	3,540,251	4,622,622	3,955,325	2,799,450
Total revenue, 1872 to date	54,834,457	59,278,587	62,819,848	67,442,520	71,397,845	74,197,295
Letters patent for Dominion lands..No.	18,774	23,227	16,810	17,732	17,947	13,116
Homstead entries..... "	11,199	8,319	4,227	6,732	5,389	7,349

Railway Lands.—Table 5 is a record for the three fiscal years 1921, 1922, 1923, of the sales of lands by the Hudson's Bay Company and by railway companies having government land grants. The total sales in the fiscal year ended Mar. 31, 1923, amounted to 123,303 acres at a price of $1,864,364, as compared with 155,239 acres at a price of $2,633,572 in the previous fiscal year. The 1923 prices averaged $15.18 per acre, as against $16.96 in the preceding year.

5.—Land Sales by Railway Companies having Government Land Grants, and by the Hudson's Bay Company, in the fiscal years 1921-1923.

Companies.	1921.		1922.		1923.	
	Acres.	Amount.	Acres.	Amount.	Acres.	Amount.
		$		$		$
Hudson's Bay Co	178,301	3,037,369	33,595	545,611	24,976	366,257
Canadian Pacific Railway	275,636	5,898,994	101,497	1,732,350	83,485	1,248,968
Manitoba Southwestern Colonization Railway	1,518	20,058	1,519	15,497	373	5,107
Qu'Appelle, Long Lake and Saskatchewan Railroad and Steamboat Co	11,432	160,472	1,274	22,315	1,122	17,000
Calgary and Edmonton Railway Company	11,681	191,928	3,024	51,603	1,013	15,552
Canadian Northern Railway Company	69,934	1,455,319	14,163	263,199	11,214	190,112
Great Northern Central Railway Company	5,128	96,616	167	2,997	1,120	21,368
Total	**553,630**	**10,860,756**	**155,239**	**2,633,572**	**123,303**	**1,864,364**

2.—Provincial Public Lands.[1]

In the Maritime Provinces, in Quebec, Ontario, and British Columbia, the public lands are administered by the Provincial Governments. In Prince Edward Island all the land is settled.

Nova Scotia.—In Nova Scotia there are no free grants of land; but, under conditions prescribed by the Crown Lands Act of the Provincial Assembly (10 Edw. VII, 1910, c. 4, s. 26), and an amending Act of May 3, 1912, Crown lands, not exceeding in each case 150 acres, may be granted for agricultural or grazing purposes to applicants of not less than 18 years of age at the price of $1 per acre, in

[1] For copies of the detailed regulations governing the disposal of provincial Crown lands, application should be made as follows: Nova Scotia, to the Secretary for Industries and Immigration, Halifax; New Brunswick, to the Deputy Minister of Lands and Mines, Fredericton; Quebec, to the Deputy Minister of Lands and Forests, Quebec; Ontario, to the Minister of Lands and Forests, Parliament Buildings, Toronto; British Columbia, to the Deputy Minister of Lands, Victoria.

addition to the expenses of survey. Leases and grants of Crown lands may also be obtained upon conditions prescribed. The total area of the Crown lands in Nova Scotia is approximately 795,644 acres.

New Brunswick.—The area of New Brunswick is about 17,143,000 acres. Of this the Crown holds about 7,500,000 acres, most of which is timber land. The province is essentially a wooded country, and will in all probability always derive a large part of its revenue from lumbering industries. Practically all the Crown timber lands are held by license for the cutting of timber, most of these licenses expiring in the year 1933. While it may safely be said that the bulk of the Crown lands are better suited to lumbering than agriculture, yet there are still some Crown lands well suited to mixed farming, which may be taken up by prospective settlers. One hundred acres is the maximum allowed to any one settler, and he is required to reside on the land and cultivate ten acres of the same for three years before obtaining a grant. For some of the best lands there is a charge of $1 per acre in addition to the settlement duties already referred to. The Crown controls the right to hunt and fish within the province. Hunting of migratory birds and fishing in tidal waters are, however, under the control of the Dominion Government.

Quebec.—In Quebec the area of public lands subdivided and unsold on June 30, 1921, was 8,025,703 acres. During the year ended June 30, 1922, 107,871 acres were surveyed; 65,818 acres reverted to the Crown; 221,362 acres were granted for agricultural and industrial purposes, etc.; the receipts from village lots, as well as from the Jesuits' estates and the Seigniory of Lauzon, etc., amounted to $18,029. Adding to the acreage available at June 30, 1921, the area surveyed and the areas that reverted, and deducting sales and grants, there remained, subdivided and unsold on June 30, 1922, 7,978,030 acres. Agricultural lands in 100 acre lots are available for settlement, upon prescribed conditions, at 60 cents per acre.

Ontario.—In Ontario the public lands which are open for disposal are chiefly situated in the districts of Muskoka, Parry Sound, Nipissing, Sudbury, Algoma, Timiskaming, Thunder Bay, Kenora and Rainy River, and in the counties of Haliburton, Peterborough, Hastings, Frontenac, Lennox and Addington and Renfrew. In northern Ontario, which comprises the territory lying north and west of the Ottawa and French rivers, the townships open for sale are subdivided into lots of 320 acres, or sections of 640 acres, and a half lot or quarter section of 160 acres is allowed to each applicant at the price of 50 cents per acre, payable one-fourth cash and the balance in three annual instalments with interest at 6 p.c. The applicant must be male (or sole female) head of a family, or a single man over 18 years of age. The conditions of purchase include actual occupation by the purchaser, the erection of a house, the clearance and cultivation of at least 10 p.c. of the area, and three years' residence. Proxy regulations enable an individual to purchase a half lot of 160 acres and place an agent in residence, but the duties to be performed before issue of patent are double those required in ordinary purchases.

Free grants are available on lands within the districts of Algoma, Nipissing, Thunder Bay, Sudbury, Rainy River and Kenora, and between the Ottawa river and the Georgian bay, comprising portions of the counties of Renfrew, Frontenac, Addington, Hastings, Peterborough and Haliburton and the districts of Muskoka and Parry Sound. Grants of 160 acres are made to either single or married men in free grant territories where the land is subdivided in sections of 320 acres. In the Huron and Ottawa territory an allowance for waste lands may increase the

grant of a single man to an area not exceeding 200 acres, while heads of families may secure 200 acres free and purchase an additional 100 acres at 50 cents an acre. The settlement duties for free grants are as follows: (*a*) at least 15 acres to be cleared and brought under cultivation, of which 2 acres at least are to be cleared and cultivated annually; (*b*) a habitable house to be built at least 16 by 20 feet in size; (*c*) actual and continuous residence upon and cultivation of the land for 3 years after location, and thence to the issue of the patent. The mines and minerals, and all timber other than pine, are covered by the patent.

Returned soldiers who enlisted and rendered overseas service with the Canadian Expeditionary Forces are each entitled to an allocation of 160 acres free, in any township regularly open for sale, subject nevertheless to the performance of settlement duties.

Ranching lands may be obtained on reasonable terms in waste and wooded areas, the valley of the Trent river, lying between lake Ontario and the Georgian bay, affording good opportunities for cattle and sheep raising. The maximum annual rental is 5 cents an acre, on easy stocking conditions. Leases may issue on condition that there be regularly maintained on the land such number of head of stock as may be consistent with the resources of the area covered.

Ontario includes 230,000,000 acres of land, of which only 14,500,000 acres are under cultivation. More than 20,000,000 acres of the very finest arable land await the plough. Ontario is 3½ times as large as the British Isles and 1½ times as large as Texas, and almost twice the size of France or Germany. From east to west its borders are 1,000 miles apart, and from north to south, 1,075 miles. Recent railway construction and colonization road building have made accessible vast tracts of untilled farm land and virgin forests in northern Ontario.

Loans are made to settlers in the northern and northwestern districts of Ontario. The maximum amount of any loan to be made to a settler is $500, with interest at 6 p.c. per annum, upon such terms and conditions as the Loan Commissioner may approve. The Government of Ontario is anxious that all *bona fide* settlers shall take full advantage of the opportunity provided to secure any needed loan, and full information with respect to same may be secured on application to the various Crown Lands Agents, or direct from the Settlers' Loan Commissioner, Toronto.

Sites for summer cottages under reasonable terms and conditions may be acquired by lease within the Government parks, including Algonquin Provincial Park, and by purchase in certain other sections of the province. Islands in Timagami are leased without building conditions, but islands elsewhere are sold in 5 acre parcels, subject in each case to the erection of a building costing not less than $500 within 18 months.[1] The price of mainland is $10 and of islands $20 per acre.

British Columbia.—In British Columbia there are large areas of free grant lands. Any British subject, being the head of a family, a widow, a *femme sole* who is over 18 years of age and self-supporting, a woman deserted by her husband, or whose husband has not contributed to her support for 2 years, a bachelor over 18 years of age, or any alien on his making a declaration of his intention to become a British subject, may pre-empt free 160 acres of the unoccupied and unreserved surveyed Crown lands, not being an Indian settlement and not carrying more than 8,000 feet per acre of milling timber west of, and 5,000 feet per acre east of the Cascade range. Fees payable include $2 for recording, $2 for certificate of im-

[1] Further particulars, may be obtained on application to the Minister of Lands and Forests, Parliament Buildings, Toronto, Ont.

provement and $10 for Crown grant. Residence and improvement conditions are imposed. After occupation for 5 years and making improvements to value of $10 per acre, including clearing and cultivation of at least 5 acres, the pre-emptor may obtain certificate of improvement and Crown grant. The fact that an applicant has previously homesteaded in another province does not preclude him from pre-empting in British Columbia. Unsurveyed lands cannot be pre-empted.

Homesite leases of an area not exceeding 20 acres, surveyed or unsurveyed, may be obtained for occupation and cultivation—this being a provision to enable fishermen, miners or others to obtain homesites—at a small rental, under improvement conditions, including building of dwelling in first year, title being procurable after five years' occupation and completion of survey.

Under the Land Act, vacant and unreserved Crown lands, surveyed or unsurveyed, can be purchased in quantities not exceeding 640 acres for agricultural purposes, on improvement conditions. The Minister may require improvements to the value of $5 per acre within 4 years of allowance of the sale, and Crown grant may be withheld until it is certified that improvements are made. Price of first class (agricultural) lands is $5 per acre; second class (grazing) lands $2.50 per acre.

Crown lands are leased, subject to covenants and agreements deemed advisable, for agricultural or industrial purposes—for hay-cutting, up to 10 years; for other purposes, except timber-cutting, up to 21 years.

The Land Settlement Board has selected a number of land settlement areas contiguous to the Canadian National Railways. Lands within these areas are sold on easy terms for farming purposes, conditional upon development, prices being usually from $3 to $10 an acre, a small cash payment being required, and the balance spread over a term of years to suit purchaser. Returned British Columbia soldiers are entitled to abatement of $500 on purchase price. The Board has power to enforce orders on those owning land within an area to improve it, and to levy a penalty tax for failure; also power to procure compulsory sale of undeveloped land. To established settlers, loans are made by the Board for development purposes of from $250 to $10,000, not exceeding 60 p.c. of improved value of land offered as security.

Timber-cutting rights are acquired by timber-sale. The applicant locates the timber, and, application being made, the area is cruised, surveyed if necessary, and advertised for sale by tender. All particulars are obtainable from the Forest Branch, Department of Lands. Information regarding water-rights for power, irrigation, etc., may be obtained by addressing the Water Rights Branch, Department of Lands.

The area of land administered by the province is 223,519,920 acres, of which 197,408,896 acres are vacant and unreserved; 5,725,358 acres are included in Indian, park, game, forest and other reserves, and 7,880,000 acres in timber, pulp, coal, grazing and other leases or licenses. The total area of surveys is 32,729,473 acres, including 22,620,266 acres of land surveys, 8,983 085 acres of timber, 658,462 acres of coal lands and 470,754 acres of mineral claims. The area included in cities is 56,270 acres and in district municipalities 888,378 acres.

The area of the province is 238,469,600 acres, of which 92,800,000 acres is above timberline, and 91,432,100 acres is forested—39,352,000 acres carrying over 1,000 ft. per acre and 17,281,600 acres from 5,000-30,000 ft. per acre. The area suitable for agriculture is estimated at 22,608,000 acres. On Vancouver island, an area of 2,110,054 acres is included in the Esquimalt and Nanaimo Ry. land grant, embracing the southeastern portion of the island, and applications for lands in this area are to be made to the land agent of that railway at Victoria.

II.—PUBLIC DEFENCE.

Before the outbreak of the war, the Canadian Militia consisted of a Permanent Force, which on March 31, 1914, numbered 3,000 officers, non-commissioned officers and men, and an Active Militia, which at the same date numbered 5,615 officers and 68,991 non-commissioned officers and men. After the outbreak of the war on August 4, 1914, successive contingents of troops of all arms were recruited, equipped, trained and despatched by the Canadian Government to Great Britain for active service. When hostilities ceased on November 11, 1918, there had been sent overseas for active service in the Canadian Expeditionary Force about 418,000 officers, non-commissioned officers and men.[1]

Organization.—Prior to 1922, three Departments of the Canadian Government were concerned with the defence of Canada, viz.: the Department of Militia and Defence; the Department of Marine and Naval Service; the Air Board.

During the session of 1922, the National Defence Act was passed consolidating the Naval Service, the Air Board and the Department of Militia and Defence into the Department of National Defence. This Act became effective by proclamation on Jan. 1, 1923. Under it there is a Minister of National Defence and a Deputy Minister of National Defence. To advise the Minister, there has been constituted by Order in Council a Defence Council, consisting of:—a President (the Minister), a Vice-President (the Deputy Minister), and the following members:—the Chief of Staff, the Director of Naval Service, together with the Adjutant-General, the Quartermaster-General and the Director, Royal Canadian Air Force, as associate members. There is also a Secretary of the Council.

1.—Military Forces.

The Militia of Canada is constituted by the Militia Act. It is divided into Active Militia and Reserve Militia. The Active Militia is divided into the Permanent and the Non-Permanent Militia.

Permanent Militia.—The Permanent Force consists of the following units:—

Cavalry.—The Royal Canadian Dragoons; Lord Strathcona's Horse (Royal Canadians).

Artillery.—The Royal Canadian Horse Artillery Brigade ("A", "B" and "C" Batteries); Royal Canadian Garrison Artillery (Nos. 1, 2, 3, 4 and 5 Companies).

Engineers.—Royal Canadian Engineers (13 detachments).

Signals.—The Royal Canadian Corps of Signals.

Infantry.—The Royal Canadian Regiment; Princess Patricia's Canadian Light Infantry; The Royal 22nd Regiment (a French-Canadian regiment).

Army Service Corps.—The Royal Canadian Army Service Corps (12 detachments).

Medical Corps.—The Royal Canadian Army Medical Corps (12 detachments).

Veterinary Corps.—The Royal Canadian Army Veterinary Corps (8 detachments).

Ordnance Corps.—The Royal Canadian Ordnance Corps (12 detachments).

Pay Corps.—The Royal Canadian Army Pay Corps (12 detachments).

Military Clerks.—The Corps of Military Staff Clerks (12 detachments).

[1] For the detailed expenditures of the Canadian Government on account of war appropriations for the years 1915–1921 see the Canada Year Book, 1921, p. 798.

Schools of Instruction.—The Canadian Small Arms School.—This is the only School which is an independent unit of the Permanent Force, but at all stations of the Permanent Force in Canada there are conducted Royal Schools of Instruction.

Non-Permanent Militia.—The Non-Permanent Militia consists of:—

34 Regiments of Cavalry and Mounted Rifles.
61 Batteries of Field Artillery (Light).
19 Batteries and 9 Companies of Medium and Heavy Artillery.
15 Field Companies.
2 Fortress Companies.
7 Field Troops of Engineers.
16 Signal Companies.
2 Fortress Signal Companies.
7 Signal Troops of the Signal Corps.
12 Companies of Cyclists.
43 Companies of the Canadian Officers Training Corps.
123 Battalions of Infantry.
15 Machine Gun Units.
21 Companies of the Army Service Corps.
82 Units of the Canadian Army Medical Corps.
11 Detachments of the Canadian Dental Corps.
11 Detachments of the Canadian Army Veterinary Corps.
11 Detachments of the Canadian Ordnance Corps.
13 Detachments of the Canadian Pay Corps.

The following table shows the numbers of men and horses in the Permanent and Non-Permanent Canadian Active Militia.

6.—Permanent and Non-Permanent Active Militia in Canada, 1923.

Descriptions.	Permanent Active Militia.		Non-Permanent Active Militia.	
	Men.	Horses.	Men.	Horses.
Headquarters Staff and special employees	39	–	–	–
Cavalry and Mounted Rifles	478	305	11,753	10,548
Field Artillery	403	271	7,493	4,654
Heavy and Siege Artillery	–	–	2,026	905
Garrison Artillery	296	37	1,159	9
Engineers	281	21	3,336	647
Signals	63	–	3,309	1,200
Bicyclists	–	–	1,308	24
Machine Gun Corps	–	–	6,602	711
Infantry	907	38	70,584	720
Railway Corps	–	–	373	–
Schools of Instruction	–	–	5,719	–
Non-combatants	1,144	84	9,244	3,240
Total	**3,611**	**756**	**122,906**	**22,658**

Reserve Militia.—In addition to the Active Militia, there is also the Reserve Militia, a framework designed to serve as a basis for contingent military organization. For each unit of Cavalry, Artillery and Infantry of the Active Militia a corresponding reserve unit has been constituted, unorganized at present, however, with the exception of the posting of officers.

Military Districts.—For the command, training and administration of the Canadian Militia, Canada is divided into eleven Military Districts, each under a Commander, assisted by a District Staff.

Militia Appropriations.—Table 7 shows the militia vote for the fiscal years ending March 31, 1921, 1922, 1923 and 1924.

7.—Money Voted by Parliament for the Militia, for fiscal years ending March 31, 1921, 1922, 1923, 1924.

Items.	1921.	1922.	1923.	1924.
	$	$	$	$
Allowances, Active Militia	120,000	120,000	120,000	100,000
Annual Drill	1,500,000	1,500,000	1,000,000	1,050,000
Cadet Services	390,000	450,000	350,000	450,000
Clothing and Necessaries	60,000	264,346	340,400	300,000
Contingencies	50,000	40,000	40,000	25,000
Customs Dues	50,000	40,000	25,000	12,000
Departmental Library	1,000	2,000	2,000	2,000
Dominion Arsenal, Lindsay	258,112	243,300	25,000	9,000
Dominion Arsenal, Quebec	532,512	428,300	375,000	390,000
Engineer Services	705,000	600,000	560,000	560,000
Grants to Associations	105,000	125,000	100,000	100,000
Maintenance	200,000	200,000	235,000	250,000
Ordnance Arms, Lands	100,000	75,000	66,000	66,000
Pay of Staff	345,600	265,000	255,000	255,000
Permanent Force	6,500,000	6,255,000	5,500,000	5,290,000
Printing and Stationery	70,000	85,000	85,000	70,000
Royal Military College	284,819	350,000	345,000	345,000
Salaries and Wages	331,463	225,000	225,000	250,000
Schools of Instruction	150,000	150,000	90,000	115,000
Topographic Survey	45,000	45,000	45,000	45,000
Training Areas	30,000	30,000	15,000	5,000
Transport and Freight	300,000	200,000	200,000	185,000
Warlike Stores	400,000	197,054	100,000	160,000
Total[1]	**12,551,808**	**11,890,000**	**10,099,982**	**10,036,237**
Civil Government	247,430	673,751	751,797	762,681[2]
Grand Total	**12,802,238**	**12,563,751**	**10,851,779**	**10,798,918**

[1] A few contingent amounts complete the total. [2] Department of National Defence.

2.—The Naval Service.

The Naval Service became part of the Department of National Defence by the National Defence Act, 1922. The senior officer is styled the Director of Naval Service, and is a member of the Defence Council. The Service consists of,—(1) Headquarters at Ottawa (Permanent), (2) The Royal Canadian Navy (Permanent), (3) Canadian Naval Reserve (Militia), (4) Canadian Naval Volunteer Reserve (Volunteer).

The Royal Canadian Navy (Permanent Service) consists of 2 destroyers and 4 trawlers on the active list, with the light cruiser *Aurora* and submarines *CH 14* and *CH 15* in reserve.

The Canadian Naval Reserve consists of 500 officers and seamen, recruited from seafaring personnel.

The Canadian Naval Volunteer Reserve consists of 70 officers and 930 men, organized as a division and distributed by detachments as follows:—Charlottetown, Quebec, Montreal, Ottawa, Toronto, Hamilton, Winnipeg, Saskatoon, Regina, Edmonton, Calgary and Vancouver.

The money voted by Parliament for naval service for the fiscal year ending March 31, 1924, was $1,515,500.

3.—The Air Board.

The Air Board Act of 1919 empowered the Governor in Council to appoint an Air Board, with a Minister of the Crown as chairman, to control aerodromes, aircraft, etc., and, generally, aerial navigation in Canada and its territorial waters. The work of the Board fell into three main divisions: the control of civil aviation, the direction of flying operations for other Departments of the Government and the direction of the Canadian Air Force.

By virtue of the National Defence Act of 1922, the powers, duties and functions vested in the Air Board by the Air Board Act or by any order or regulation made thereunder shall in future be administered, exercised and performed by the Minister of National Defence.

The executive duties of the Air Board are now carried out under the Chief of Staff by the Director of the Royal Canadian Air Force and staff.

The strength of the Royal Canadian Air Force (Permanent Service) on May 31, 1923, was 49 officers and 262 other ranks.

In 1922, 325 Air Officers (Non-permanent) were trained in short and long courses at Camp Borden.

The Royal Canadian Air Force has carried out flying operations for the following Departments of the Government: The Department of the Interior, the Department of Mines, the Department of Indian Affairs, the Department of Marine and Fisheries, the Department of Agriculture, the Department of Customs, the Department of Immigration and the Royal Canadian Mounted Police, as well as co-operating with the Canadian Militia at their annual training.

The money voted by Parliament for air service for the fiscal year ending March, 31, 1924, was $1,250,000.

Training centres are established at Camp Borden, Ont., Winnipeg, Man., Jericho Beach, B.C., and Dartmouth, N.S.

4.—The Royal Military College.

The Royal Military College of Canada was founded in 1876 by the Honourable Alexander Mackenzie, Prime Minister of Canada. Since its foundation, 1,710 gentlemen cadets have been enrolled; of this number 146 are now in attendance and approximately 175, though their names appear on the college roll as having been admitted, either did not actually do so, or if they did join, were only at the college a very short time. Over 900 took part in the war of 1914-1918 where 159 ex-cadets made the supreme sacrifice. Some 750 British and 90 foreign decorations have been awarded to ex-cadets, and many have risen to high rank in the service of their country. Three of the Canadian divisions serving in France were commanded by ex-cadets and an ex-cadet also commanded one of the Australian divisions at Gallipoli. The establishment of the College, as stated in the Act of 1874 (37 Vict., c. 36), was "for the purpose of imparting a complete education in all branches of military tactics, fortifications, engineering and general scientific knowledge in the subjects connected with and necessary to a thorough knowledge of the military profession, and for qualifying officers for command and staff appointments." In addition to the foregoing, the course of instruction is such as to afford a thorough, practical and scientific training in civil engineering, surveying, physics and chemistry, English and French. Strict discipline, combined with physical training, riding, drill and outdoor games, forms part of the curriculum.

The College is situated on a beautiful peninsula, one mile from Kingston, with the Cataraqui river on the one side, emptying into the St. Lawrence river at its junction with lake Ontario, and Navy bay on the other. The grounds include about 500 acres. The buildings of the College proper are situated on the above-mentioned peninsula, comprising 60 acres. The remainder of the grounds, on which stands the historic fort Henry, are at the disposal of the College for use as a training area. On the point of the College peninsula is situated fort Frederick, built in 1837, when Kingston became capital of Canada, the fort comprising a portion of the defences of Kingston. The College is under the supervision of Militia Headquarters, who annually appoint an advisory board composed of leading Canadian citizens both civil and military. The staff is composed of a commandant, and a staff-adjutant, assisted by a competent staff of civil and military professors and instructors.

A four years' course leads to a "Diploma with Honours" or "Diploma" and "Certificate of Discharge". To graduates are annually offered a number of commissions in the Canadian Permanent Force, as well as commissions in the Royal Artillery, Royal Engineers and other branches of the regular Britannic Army. To those graduates joining the Britannic Army, the privilege of one year's seniority is granted in the Britannic or Indian Armies. This has been arranged in order to equalize the seniority of graduates of the Royal Military College of Canada with those of Woolwich or Sandhurst, since the course at the latter institutions is shorter than the Canadian. Positions in the Public Works Department, Hydrographic Surveys, etc., may also be obtained by graduates. Several Canadian universities admit graduates to the third years of arts and science courses.

III.—PUBLIC HEALTH AND PUBLIC BENEVOLENCE.

Greatly increased attention has been devoted during recent years to public health and related subjects in Canada, the work embracing, in addition to the supervision of the general health of the community, the maintenance of hospitals and institutions for the care of needy and indigent persons. In general the establishment and maintenance of such institutions is in the hands of the various provincial Governments, under the powers given them in the British North America Act, 1867. Under their control, municipal governments and various societies and individuals initiate and foster charitable and humane efforts, depending on the Government to some extent for financial aid and for competent, uniform inspection of methods and standards. Exercising particular jurisdiction over some phases of the general health of the people of the Dominion, is the Department of Health of the Dominion Government.

Public Health.—Considerable diversity in methods of administration of public health activities is encountered in the different provinces. Apart, however, from the actual organization of provincial Health Departments and of the administrative bodies charged with the management of hospitals and other such institutions, it will be observed, in the summaries of provincial activities which follow, that particular attention is given to the same branches of public health work in all the provinces. Perhaps the most important of all, and those which reflect most clearly the benefits accruing from such work, are the systems of medical inspection of school children. This is carried out in some cases by the district or sub-district medical health officers, and in others by public health nurses whose activities are confined to it alone. In addition to the continual supervision exercised over the health of the children, expert advice and assistance are supplied freely to children,

teachers and parents. In many cases, dental inspection is provided for. While this work has been carried on on a considerable scale for but a few years, great benefits have already been realized from it, notably general improvement in health and sanitary conditions both in schools and homes, and in the prevention of epidemics.

In other directions also, governmental activities through Departments of Health have produced numerous evidences of their value, which may be illustrated by an examination of the death rates from various communicable and other diseases, such as those shown in the Population section of the present volume under the heading of "Vital Statistics". An example may be taken from Ontario as being, perhaps, the province in which public health education and activities have reached the highest stage of development. In this province, the rate of deaths from tuberculosis has decreased from 87·1 to 71·0 per 100,000 during the period 1912 to 1921, that from typhoid fever from 19·4 to 7·2 per 100,000, from measles from 4·2 to 1·8, and from whooping cough from 16·2 to 10·5. While some other rates have increased, it may be noted that increases are not general in the case of communicable diseases and that, in respect to tuberculosis especially, the cities of the province show the lowest mortality rates. The reason for this is the fact that public health work is more advanced there than in the towns and rural areas, and its good effect in respect to this and other diseases is apparent. Public health work, indeed, has rendered the development and spread of epidemics of the more common diseases practically impossible.

Institutions.—The most familiar of all public institutions established to administer and foster the general health of the community is the general hospital, common to all cities and towns of any considerable population, and found also in the more modern and prosperous rural districts. Such hospitals are generally erected and supported by the municipality, their actual administration being in the hands of a board of trustees, and their revenue, in addition to that provided by the municipality, being drawn, in the main, from grants from the provincial Government, from donations from individuals and societies and from patients' fees. Admission and treatment are free to all deserving persons who apply for it and whose resources are so limited as to prevent their otherwise receiving proper medical attention. Second in importance are the houses of refuge and orphanages, homes where destitute adults and homeless children are taken in, fed and clothed until they can support themselves or until homes for them are found elsewhere. Orphans' homes are found in practically every urban and rural community of any size, while refuges or homes for the aged are supported by the larger centres and by county municipalities. Asylums for the insane, also found in all the provinces, differ from the foregoing types in that they are in general owned, supported and administered entirely by the province. In Nova Scotia, however, the insane of separate counties are, in some instances, cared for in one institution, together with the inmates of the refuge and orphanage. In addition, other institutions supported by the public include isolation hospitals, maternity hospitals, homes for the deaf, dumb and blind, homes for incurables, infirmaries, homes for epileptics and for lepers, and tuberculosis sanatoria.

Throughout the Dominion many other more or less similar institutions exist, whose nature is more independent than that of the types mentioned above. Among them are included several hospitals supported by the Dominion Government for the benefit of returned soldiers, and numerous small homes and hospitals depending entirely on private aid. Since these institutions do not receive provin-

cial Government grants and hence are not in all cases subject to inspection, no accurate record showing their number, purpose and the number of inmates can be obtained.

But little historical information on the subject is available. No statistics of public benevolence have been included in the Canada Year Book for several years. It seems, however, that until comparatively recently, the caring for needy and destitute persons, as we now recognize it, was largely in the hands of individuals, of whose humane efforts scanty evidence remains for present use. The inability of private effort to cope with a problem of rapidly increasing dimensions has led to the present government control of the majority of such establishments.

In the exercise of the powers granted them at Confederation, the various provincial governments have enacted considerable legislation governing the regulation of public charities. In Ontario, for example, the Houses of Refuge Act, the Hospitals for the Insane Act, the Private Sanitarium Act, the Sanatoria for Consumptives Act, the Hospitals and Charitable Institutions Act and the Prisons and Public Charities Inspection Act have been passed, dealing with different phases of the subject. Similar legislation by other provincial Governments also provides for the carrying on of charitable work, the provision of funds and for inspection by competent officials.

A summary of the work carried on throughout the country, including the activities of the Dominion Department of Health and those of the various provincial Governments, is appended.

1.—Dominion Department of Health.

The activities of the Dominion Department of Health for the fiscal year 1923 may be classified under the following eleven headings:—Quarantine Service, Immigration Medical Service, Marine Hospitals Service, Venereal Disease Control, Housing, with Hospitalization and Sanitation, Opium and Narcotic Drugs, Proprietary or Patent Medicines, Child Welfare, Food and Drug Laboratories, Public Works Health Act and Finance.

Quarantine Service.—Organized quarantine stations were operated at Charlottetown, P.E.I., Chatham, N.B., Halifax, N.S., Louisbourg, N.S., North Sydney, N.S., Quebec, Que., St. John, N.B., and Victoria, B.C. The total number of vessels reporting at the above stations was 1,897, and of examinations of individuals 289,292. A total of 638 persons was distributed to quarantine hospitals and detention buildings. Of these, 128 were actually sick; the remainder, of whom 331 were detained as possible smallpox contacts, was made up of contacts and persons accompanying the sick. Of the 28 diseases treated in the quarantine hospitals, 59 of the total number of cases were of measles, 9 of scarlet fever, 8 of chicken pox and 8 of diphtheria, the remaining diseases occurring in 5 or fewer cases. A total of 1,772 persons was vaccinated.

Immigration Medical Service.—For the purpose of detecting physical or mental defects, 66,480 immigrant passengers were examined; of this number 571 were found to be of the prohibited classes, and 152 others were found upon arrival to require medical or surgical treatment. An additional number of 661 was found to have minor defects, which did not, however, prevent their certification by the medical officers of the service.

The service has under its supervision two leper stations, one at Tracadie, N.B., and the other at D'Arcy island, B.C. Eleven patients were under treatment at the Tracadie lazaretto, six males and five females. One new case was admitted

during the year and no deaths were reported. Five Chinese patients were cared for during the year at the D'Arcy island lazaretto, the number being unchanged from the previous year.

Marine Hospital Service.—The Department operates two marine hospitals, at Sydney and Lunenburg, N.S., revenues for the purpose being collected on the tonnage of vessels arriving at ports in the Maritime Provinces, Quebec and British Columbia. Gratuitous treatment is accorded all needy mariners from vessels paying such dues. In addition to the two hospitals maintained by the Government, treatment was provided during the year at 52 town and city hospitals in the five provinces to 2,663 injured and distressed mariners.

Venereal Disease Control.—The sum of $200,000 was voted by the Dominion Government to aid in the prevention of the spread of venereal diseases. This amount is allotted to the various provinces engaged in the work. The campaign carried on throughout the country by the various governments may be divided roughly into five main activities,—treatment, education, social service, law enforcement and the collection of statistics. There are 54 clinics in operation throughout the Dominion, at which free treatment may be obtained, while free hospital accommodation is given where necessary. Both the Dominion and the provincial Governments have issued pamphlets and circulars designed to prevent the spread of the diseases.

Housing, Hospitalization and Sanitation.—Under the Dominion Housing Act, an amount of $9,550,080 was voted by the Dominion Parliament for the year. Of this sum $3,225,816 was lent to the seven provinces included in the scheme, to which total loans up to March 31, 1923, amounted to $20,333,406. The total number of houses erected was 4,612, while those under construction and planned total 223. Municipalities to the number of 160 are operating under the Act.

Opium and Narcotic Drugs.—During the year the Department issued 200 import licenses, 40 export licenses, 110 wholesale druggists' licenses and 56 licenses to retail manufacturing druggists. Narcotics imported into Canada were as follows: cocaine, 3,330 ozs., morphine, 10,998 ozs., and crude opium, 1,373 lbs.

Close supervision is maintained on all exports and imports of narcotics, and the licensing system enables the Department to know at all times the amount of these drugs received by every druggist, veterinary surgeon, dentist or physician in Canada. By this system it is possible for the Department to check up the disposition of these drugs, and to make absolutely certain that the use being made of them does not contravene the Act. While the illicit traffic is a much more difficult problem to handle, no fewer than 692 convictions were obtained during the year. Figures are not available to show the number of convictions other than by the Royal Canadian Mounted Police for infractions of the Act for the fiscal year, but for the judicial year ended September 30, 1922, there were in all 1,858 prosecutions, including the Dominion cases.

Proprietary or Patent Medicines.—Medicines registered and licensed under the Proprietary or Patent Medicine Act during the year 1922-23 numbered 4,868. Under the operation of the Act, which has as its fundamental principle the requirement that all such articles shall be on the market in a way which permits the ordinary layman to understand what he is buying, many articles were rejected as absolute frauds and dangerous to health. Periodically, samples of various medicines are obtained in the open market and are sent to the laboratory, for the purpose of confirming and approving the ingredients of each.

Child Welfare.—General co-operation in matters relating to child and maternal welfare has been continued or established with the various Departments of the Dominion Government, provincial Governments and voluntary societies throughout the country. A "Handbook of Child Welfare Work in Canada" has been prepared and published during the year, while a new and revised edition of the "Canadian Mother's Book" has been issued, together with several reprints of the "Little Blue Books—Home Series".

Food and Drugs Division.—A total of 5,894 samples of foods and drugs were examined during the year in the laboratories of the Department, to determine their purity or degree of adulteration. Numerous prosecutions were made under the provisions of the Food and Drugs Act, where goods not conforming with the law had been offered for sale.

Public Works Health Act.—The activities of the Department under the Public Works Health Act have comprised the maintenance of a hospital, a first-aid office and an ambulance service along the new Welland canal, now under construction between lake Ontario and lake Erie. A total of 1,733 visits were made by the medical officer, 2,500 cases were treated as hospital out-patients, 51 were given hospital treatment, while a total of 927 hospital days were afforded to patients.

Financial Statements.—A net expenditure for the year of $914,690 is recorded, in which the largest items are Quarantine and Public Works Health Act, $225,002; Venereal Diseases, $189,928; Salaries, $129,317; Marine Hospitals, $114,727, and Administration of Food and Drugs Act, $111,565. Revenues amounted to $205,983, of which sick mariners' dues totalled $161,010.

2.—Other Public Health Activities.

1.—Prince Edward Island.

In the report of the trustees of the Falconwood Hospital and Provincial Infirmary for the year ended December 31, 1922, a total of 309 patients were shown as resident on this date, compared with a total of 295 at the beginning of the year. During the year 74 patients had been admitted, while discharges and deaths totalled 60. Expenditure for maintenance and repair of the institutions amounted to $100,464, while revenues from fees and other sources were $9,170.

2.—Nova Scotia.

The Department of Public Health of Nova Scotia, in its report for the year ended Sept. 30, 1922, outlines its main activities in the following groups: collection of vital statistics, education and publicity, aid by nurses and clinics, prevention and cure of venereal diseases, medical inspection of schools and the control of communicable diseases. In the provincial laboratory, 7,688 specimens were examined and reported on during the year.

Complete information regarding hospitals in the province is not available, a considerable number of them being privately owned and under no obligation to furnish information respecting their operations. Of public and semi-public institutions, however, there are 16 general, 1 maternity and 3 isolation hospitals, 2 tuberculosis sanatoria and 23 insane asylums. The number of inmates of general and maternity hospitals increased from 625 at the beginning of the year to 654 at the close of that period. Total expenditure was $601,648, of which $155,218 was for salaries and wages. In tuberculosis sanatoria, the patients increased from 189 to 233. Total expenses were $306;035, an average of $486.54 per inmate. An increase

of admissions over discharges, during the same period, brought the number of inmates of insane asylums from 1,347 to 1,381. Total expenditure amounted to $524,488.

3.—New Brunswick.

The New Brunswick Department of Health includes among its branches those of general sanitation, water supply and communicable diseases, medical school inspection, collection of vital statistics, education and publicity, provincial laboratory and the administration of sub-health districts.

The department is administered by the Bureau of Health and more directly by the Chief Medical Officer of the province. Subordinate to him are the Chief of Laboratories, three District Medical Health Officers, in charge of the eastern, southern and western districts of the province, a Director of Nurses and a Director of Venereal Clinics. In addition, the organization is further subdivided into 16 sub-health districts, each in charge of a Medical Officer.

Accurate statistics of hospitals and similar institutions in New Brunswick are not available, the number of public institutions being the only figure at hand. Besides the 14 general hospitals in the province, there are also 2 tuberculosis sanatoria, 2 maternity hospitals, 1 insane asylum, 1 orphanage, 2 refuges and 1 leper station. Numerous other institutions of a private or semi-private nature exist, but information is lacking regarding their number and operations.

4.—Quebec.

In the administration of the health of the province, the Provincial Bureau of Health, in charge of the Provincial Secretary, with its activities divided among the fifteen public health districts, sees to the carrying out of the provisions of the Public Health Act. Twelve inspectors are appointed for the fifteen districts, their duties being divided generally between education of the public and municipal public health organization, while, in addition, their services are given in case of consultations, public lectures, maintenance of records of municipalities and medical and sanitary investigations. In addition to the district officers, the Bureau maintains a laboratory division, a division of sanitary engineering, a division of venereal diseases and a division of vital statistics.

Statistics of benevolent institutions in Quebec are collected and compiled by the Quebec Bureau of Statistics. During the year 1922 there were in existence in the province 49 general hospitals, 4 maternity hospitals, 2 crèches, 5 tuberculosis sanatoria, 6 insane asylums, 1 home for incurables and 117 orphanages and refuges. In the 55 general and maternity hospitals, the number of inmates on Jan. 1, 1922, was 3,085; 52,938 persons were admitted and 52,719 discharged, leaving 3,304 inmates on Dec. 31. Total expenditure was $3,752,369, of which $902,298 was for salaries and wages. Population in the tuberculosis sanatoria decreased from 144 to 141 during the year, expenditure per head averaging $761 and total expenses being $108,778. The number of inmates of mental hospitals increased from 5,443 to 5,708 during the year, the average constituting 0·23 p.c. of the population of the province. The cost of maintenance of insane asylums for the year was $1,389,372, offset by revenues of $1,412,751. In the orphanages and refuges of the province, admissions numbering 5,825 and discharges to the number of 5,667 increased the population from 12,243 to 12,401. Expenditure amounted to $3,351,534, an average of $272 per head, while revenues totalled $3,178,847.

5.—Ontario.

A Provincial Board of Health, responsible to the Minister of Labour, and comprising divisions in charge of laboratories, industrial hygiene, public health education, preventable diseases, sanitary engineering and maternal and child welfare, oversees the administration of the Public Health Act throughout the province. Through its division into eight districts, each of which is in charge of a District Officer of Health, close touch is maintained between the Board and the municipalities through the province. This contact, of course, is strengthened by the relations between municipally appointed health Officers and the officials appointed by the provincial Government.

In addition to the activities of the Board of Health, the Provincial Secretary is charged with the administration of the hospitals and charitable institutions, the latter including, among others, the insane asylums and hospitals for the feeble-minded and epileptics. In the report of the Inspector of Prisons and Public Charities for the year ended Sept. 30, 1921, statistics are given showing the existence in the province of 105 public hospitals, including 9 sanatoria for consumptives, 49 private hospitals, 41 refuges, 30 orphanages, 3 convalescent homes and 31 county houses of refuge. All public hospitals and charitable institutions in Ontario are entitled to government aid and are regularly inspected. The total number of patients admitted to public hospitals and sanatoria during the year was 115,442, while on Sept. 30, 1921, the number of inmates had remained practically constant, a decrease of from 7,011 to 7,006 being apparent. Total revenues amounted to $7,333,902, of which $594,364 was paid by the legislature. Total expenses amounted to $7,770,511, an average cost per day per patient of $3.22. In the 44 orphanages and refuges of the province there were, on Sept. 30, 1921, inmates numbering 3,062, an increase over the figure of the previous year of 199 persons. The average days' stay in such institutions was 198, with an average day's cost per inmate of $1.28. Total revenues amounted to $1,029,291. The 30 orphanages of the province provided a home for 2,321 persons on Sept. 30, 1921, total expenditure for the year having been $504,914, or an average per inmate per day of $0.60.

On Oct. 31, 1921, a gross total of 7,967 insane, feeble-minded and epileptic persons were being cared for in the twelve provincial public institutions for the purpose. The inmates of the nine insane asylums had increased during the year from 6,504 to 6,638, admissions amounting to 1,094 against discharges, etc., totalling 1,860. The hospitals for feeble-minded and epileptics showed an increased population (1,329) on Oct. 31, 1921, that of the previous year having been 1,185. Revenues for the year from all sources increased to a total of $1,244,286. Estimated expenditures totalled $2,758,061.

6.—Manitoba.

The report of the Provincial Board of Health for the year ended Dec. 31, 1920, is the last available concerning the activities of this body. The various departments of the Board comprise those of public health nursing, food inspection, venereal disease prevention, the recording and prevention of communicable diseases and vital statistics. Under the Superintendent of Provincial Public Health Nurses, a large amount of work is carried on in the direction of education, medical school inspection, child welfare, public service nursing, and the distribution of literature. The work of other divisions is more or less of a routine nature.

Very incomplete information is available regarding hospitals and charitable institutions throughout the province. There are three hospitals in the province

for the care of mentally defective persons, to which total admissions, during the ten months ended Aug. 31, 1922, were 211, compared with discharges and deaths totalling 159. A total of 1,343 patients were under treatment in the three institutions on Aug. 31, 1922, this figure representing 0·22 of the total population of the province. Total expenditure amounted to $274,804, or $1.43 per head for the ten-month period. Revenues from fees and other sources amounted to $90,322. At the home for incurables of the province, the number of inmates increased between Dec. 1, 1921, and Aug. 31, 1922, from 339 to 368, expenses of maintenance amounting to $58,899 or $1.02 per head per day. Revenues from fees and other sources were $31,553.

7.—Saskatchewan.

In the province of Saskatchewan, the Bureau of Public Health, organized under the Minister of Public Health, is in charge of the general duties devolving on the department. Among its main activities it numbers the precautions taken against and the arresting of epidemics, medical school inspection and treatment, venereal disease prevention, child welfare and home nursing, and the examination and certification of embalmers. In addition, the Bureau employs an analyst and pathologist and a bacteriologist; its sanitary division oversees water and food supplies throughout the province and general provisions for sanitation, while another division compiles the vital statistics of the province.

In addition to the hospitals which Saskatchewan has in common with the other provinces, mention may be made of a system known as the Union Hospital Scheme, designed to furnish necessary hospital accommodation in rural districts. Under the provisions of the scheme, two or more municipalities may co-operate in arranging to build, equip and maintain a hospital in their district and for their residents. These smaller hospitals are not intended, of course, to furnish extensive accommodation, but they do furnish splendid accommodation for emergency or maternity cases. There were 39 public general hospitals in Saskatchewan at the close of the year 1922, 37 private maternity hospitals, 27 isolation hospitals, 1 sanatorium for tuberculosis patients, 2 insane asylums and 1 home for infirm and incurables. Admissions to general hospitals during the year totalled 30,702, while total expenses amounted to $1,445,433. Tuberculosis patients decreased in number from 249 to 241 during the year. Expenses for their maintenance were $276,517, or an average of $684.45. In the insane hospitals of the province, an increase of admissions over discharges of 124 resulted in a population in these institutions of 1,294 on Dec. 31. Yearly expenditure per head was $560, making up a total of $699,757. The Home for Infirm admitted 48 persons and discharged 26, retaining a total of 85 persons. Expenses amounted to $35,987, an average of $486.31.

8.—Alberta.

Among the various Departments of the Government of Alberta is the Department of Health, in charge of one of the Ministers of the Administration. The department, however, issues no report, as far as can be ascertained, except that of its Vital Statistics Branch. Few data, therefore, are available regarding the activities carried on by the government, the only statistics to be had of the number and operations of hospitals and charitable institutions throughout the province being those of provincial Government expenditure. In the fiscal year 1921, expenditure on conservation of health and sanitation totalled $167,115, that on hospitals $628,703, and that on charities $57,364.

9.—British Columbia.

The Provincial Board of Health of British Columbia, a branch of the Department of the Provincial Secretary, is organized in five main departments; (1) sanitary, including the inspection of logging camps, tourist camps and ships; (2) venereal disease prevention; (3) public health nursing, comprising the conduct of baby clinics, medical school inspection and other social service activities; (4) laboratory, including the distribution of vaccines and antitoxins, besides the ordinary analysis of specimens, and (5) child hygiene. A report on vital statistics of the province is included in the annual report of the board.

As in Alberta, information readily available regarding hospitals and other charitable institutions, is restricted to figures of government expenditure in the fiscal year 1921. During that year $56,361 were expended on the conservation of health and sanitation, $1,125,011 on hospitals and $114,038 on charities. The only public institution regarding which complete data are at hand is the leper station at D'Arcy island, mentioned above as operated by the Dominion Department of Health.

10.—The Canadian Red Cross Society.

Closely allied with the Dominion and Provincial Governments in activities to promote the health of the people and the care of diseased or needy persons is the Canadian Red Cross Society. It was originally organized in 1896, and came into such prominence during the late war that its peace-time organization has been enlisted by the governments of all the provinces to aid in the general improvement of health and the extermination of disease.

The more important phases of the work now undertaken by the society are as follows:—(1) the assistance rendered towards the professional training of public health nurses, (2) co-operation with other organizations engaged in similar work, (3) general educational work, and (4) the use of specially trained public health nurses. In the first direction mentioned, courses have been established in six Canadian universities for the training of public health nurses. Again, the society is actively engaged, in co-operation with various other organizations throughout the country, in the combating of disease, the promotion of child welfare and the care of physically defective persons. Co-operative work is carried on with the Canadian Tuberculosis Association, the National Council for combating Venereal Diseases, the National Committee for Mental Hygiene, the Child Welfare Section of the Canadian Public Health Association, and the Canadian National Institute for the Blind. In addition to numerous public lectures and meetings, a large amount of literature has been distributed, and a monthly journal with an average circulation of over 150,000 has been published for some years. Many specially trained nurses have been placed at the disposal of the various provincial Governments by the society, to carry on educational or nursing work in schools and homes.

11.—The Victorian Order of Nurses.

While of a more specialized type than the Red Cross Society, the Victorian Order of Nurses still does a large amount of public educational work in matters of health and the prevention of disease. The order was originally founded in 1897, and from then until the present time has gradually extended its activities to cover a broad field. Twenty-four hospitals have been operated by the order in out-of-the-way parts of the country, all but five of which have been handed over to local authorities. Since its inception, the scope of the work carried on has constantly

developed and broadened, and at the present time covers all phases of family and community nursing, including such activities as home, school, industrial and hospital nursing, child welfare, social service, clinics, summer camps and general health education.

The nurses belonging to the Victorian Order are carefully selected graduates of recognized training schools, who are given post-graduate training in district nursing by the order. Originally this training was given at training centres established by the order, but since 1921 thirty scholarships of $400 each are granted annually to enable graduate nurses to take such courses at Canadian universities.

The order offers to the people of any community an efficient public health nursing service best fitted to its needs, as determined by the local committee in consultation with the proper authorities in that community. The central board at Ottawa, through field supervisors, oversees the whole Dominion. At the present time the order operates at 61 centres and maintains hospitals at Chapleau, North Bay, Cochrane, New Liskeard and Whitby. The number of nurses on active duty is 310, and in 1922 a total of 600,000 visits were made.

While the order exists primarily for the poor, a great many people who cannot afford the services of a private nurse avail themselves of the visiting service at a fee commensurate with their circumstances. A large part of the revenue of the order is obtained from this source, and is supplemented by grants, donations and subscriptions. Each district finances itself, while the revenue of the central office is derived from the interest on an endowment fund of $335,000, and annual grants of $5,000 from the Dominion Government and of $2,500 from the Province of Ontario.

12.—Mothers' Allowances.

Five of the nine provinces of Canada provide for the payment of allowances to mothers who are widowed or without adequate means of support. The province of Manitoba was the first to take up the work in 1916, and her example has been followed by the other western provinces and by Ontario.

It is a general stipulation under the existing Mothers' Allowances Acts that the mother be a resident of the province at the time of making application, that she be a British subject, generally with two or more children under fourteen years of age or with an insane or totally incapacitated husband and a similar number of children. Other similar requirements regarding residence and means of support are made, for it is not desired that applicants "be considered as applying for charity; but that the mother be regarded as an employee of the State, receiving remuneration for services rendered in the proper care of her children. The mother, as an employee of the government, must not only satisfy them of her fitness to receive an allowance, but also that she is fulfilling the trust which is being placed in her."

In most cases the allowance is provided jointly by the provincial Government and the local government of the municipality in which the applicant is resident, but in some cases—those of mothers resident outside of cities, towns and counties —the whole allowance is paid by the provincial Government. Larger allowances are at times made in cities than in towns and county municipalities, and the basic rate is generally that paid to a mother with two dependent children. Administration of the Acts is as a rule in the hands of a Commission or Superintendent, and is closely allied with other work designed to ameliorate the conditions to which certain sections of the community are subjected. In Ontario and Manitoba, for example, the Acts are administered by Commissions. In the former, the appointment of local boards, in cities, counties and districts, whose duty it is to pass on

applications before their presentation to the central body, is provided for. Through this medium also, intimate contact is maintained with beneficiaries. In Saskatchewan and Alberta, the Acts are administered by the Bureau of Child Protection and the Superintendent of Dependent and Neglected Children respectively, the organization in Alberta providing, in addition, for the appointment of inspectors in each municipality of the province. The Workmen's Compensation Board of British Columbia, assisted by a number of local advisory boards, superintends the administration of the Act in that province.

The following table shows, for the five provinces in question, the numbers of mothers and children to whom allowances have been paid, together with the latest annual and the total expenditures.

8.—Mothers' Allowances in Canada, 1922 and 1923.

Items.	Ontario.[1]	Manitoba.[2]	Saskatchewan.[3]	Alberta.[4]	British Columbia.[5]
Number of Mothers	3,771	575	725	619	995
Number of Children	11,605	–	2,537	1,844	2,535
Last yearly Expenditure $	1,382,138	162,415	195,070	252,243	463,802
Total Expenditure[6] $	2,945,184	–	501,345	660,144	1,174,607

[1] As on April 30, 1923. [2] Dec. 1, 1921 to Dec. 31, 1922. [3] Fiscal year ended Dec. 31, 1922. [4] Year ended Dec. 31, 1922. [5] Fiscal year ended Mar. 31, 1923. [6] As on latest date available.

Rates of Allowances.—Rates of allowances paid in Ontario are as follows:—In cities $40, $45, $50 and $55 per month for mothers with 2, 3, 4, and 5 children; in towns the rate is $5 lower, while the rate to beneficiaries in villages and rural areas is further reduced by $5. In families where there are more than five children, the Commission may grant a further allowance not to exceed $5 a month for each child over the number of five. In Manitoba, Saskatchewan and Alberta no set rate of allowances is paid, the aim of payments being as far as possible to make up the difference between the income and the ordinary expenditure of a family. In Saskatchewan, minimum and maximum monthly payments of $15 and $30 are established. Payments in British Columbia, are also not standardized, but regulations provide for a maximum monthly allowance of $42.50 for a dependent mother with one child and an additional $7.50 for each other child under 16 years of age. A deduction of $10 is made in case of the beneficiary owning her own home or holding it free from rent, while a maximum of $15 per month is paid to a mother and one child where board and lodging are obtained free of charge.

IV.—PUBLIC WORKS.

Since Confederation and before, the Department of Public Works has been known as the constructing department. In 1879 the railways and canals were placed under control of a new department, the building and maintenance of penitentiaries were transferred to the Department of Justice, the maintenance and construction of lighthouses to the Marine and Fisheries Department, and the smaller drill halls and armouries to the Department of Militia and Defence. The work of the Department of Public Works is now divided into three principal branches, viz., the Engineering Branch, the Architect's Branch, and the Telegraph Branch.

Engineering.—The Engineering Branch comprises the construction and repair of wharves, piers, breakwaters, dams, weirs, bank and beach protection works, the improvement of harbours and rivers by dredging, the construction, maintenance

and operation of government dredging plant, the construction and maintenance of graving docks, the construction, maintenance and working of slides and booms, the construction and maintenance of interprovincial bridges and approaches thereto, and of bridges on highways of national importance in the Northwest Territories, the maintenance of military roads, also hydrographic and ordinary surveys and examinations, inclusive of precision levelling and geodetic measurements which are required for the preparation of plans, reports and estimates, the testing of cements, etc. The Branch has charge of about 1,845 harbour works, 5 graving docks, 4 slide and boom works, interprovincial bridges, 30 dredges and 211 tugs, scows and other dredging plant.

Architecture.—The Architect's Branch builds and maintains government buildings, post offices, customs houses, examining warehouses, and constructs quarantine, immigration and experimental farm buildings, armouries, military hospitals and drill halls, land offices and telegraph offices. The most important public building now under construction is that of the new Houses of Parliament at Ottawa.

Telegraphs.—The Telegraph Branch has control over the construction, repair and maintenance of all government-owned telegraph lines and cables. These lines are located in the provinces of Nova Scotia, New Brunswick, Quebec, Ontario, Saskatchewan, Alberta, British Columbia, and the Yukon.

Graving Docks.—There are five graving or dry docks completed and owned by the Canadian Government. The dimensions of these docks are shown in Table 9. The dock at Kingston, Ontario, is under lease to the Kingston Shipbuilding Company. The dock at Lauzon, Quebec, east of the old dock, is 1,150 feet long, divided into two parts (650 and 500 feet respectively), and 120 feet wide; it has a depth at high water of 40 feet. It cost about $3,850,000. A new dock is under construction at Esquimalt, B.C.; the dimensions are given in Table 9. Under the Dry Dock Subsidies Act, 1910, (9-10 Edw. VII, c. 17), several docks have been subsidized by payments of 3 or 3½ p.c. per annum on the original cost for a given number of years, as shown by Table 10.

9.—Dimensions of Graving Docks owned by the Dominion Government.

Locations.	Length.	Width at			Depth of water on sill.	Rise of tide.	
		Coping.	Bottom.	Entrance.		Spring.	Neap.
	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.
Levis, Que.	600·3	100	59·3	67·6	25·8	18	13·3
Esquimalt, B.C.	430	90	41	65	26½	7 to 10	3 to 8
Esquimalt (New)	1,150	135	125	125	40	7 to 10	3 to 8
Kingston, Ont.	308·6	79	47	55	14½ & 16½	–	–
Lauzon, Que.	1,150	144	105	120	40 H.W.	18	13·3

10.—Dimensions and Cost of Graving Docks subsidized under the Dry Dock Subsidies Act, 1910.

Locations.	Length.	Width.	Depth over sill.	Total cost.	Subsidy.
	Feet.	Feet.	Feet.	$	
Collingwood No. 1, Ont.	515·10	59·8	16	500,000	3 p.c. for 20 years.
Collingwood No. 2, Ont.	413·2	95	16	306,965	3 p.c. for 20 years.
Port Arthur, Ont.	708·3	77·6	16·2	1,258,050	3 p.c. for 20 years.
Montreal, Que.	600	100	27·5	3,000,000	3½ p.c. for 35 years.
Prince Rupert, B.C.	600	100	25	2,199,168	3½ p.c. for 25 years.
St. John, N.B.	1,150	133·0	42·0	–	Building.
Vancouver (Floating Dock)	556·5	98·0	28·0	–	–

Expenditure and Revenue.—Table **11** shows the expenditure and revenue for the fiscal years 1917-22 of the Public Works Department of the Dominion Government. For the fiscal year 1922, the expenditure was $17,939,494 as compared with $20,970,674 in 1921, a reduction of $3,031,180, accounted for by reduced expenditure in all services with the exception of roads and bridges, where the increase of $399,984 is caused by the construction of a bridge at Banff on the Bow river, an international bridge at Edmundston, N.B., and a new bascule bridge at Burlington Channel, Ont.

11.—Expenditure and Revenue of the Public Works Department for the fiscal years 1917-1922.

EXPENDITURE.

Items.	1917.	1918.	1919.	1920.	1921.	1922.
	$	$	$	$	$	$
Harbour and river works	6,548,568	5,551,774	3,181,349	4,320,581	7,541,668	6,142,157
Dredging plant, etc	2,410,413	1,405,838	677,500	1,205,486	1,456,243	1,211,582
Slides and booms	111,876	64,859	56,169	33,339	[1]	[1]
Roads and bridges	38,266	18,991	24,952	202,888	196,209	596,193
Public buildings	5,717,450	5,843,289	7,466,679	8,442,124	8,443,892	7,401,222
Telegraphs	775,340	751,452	789,883	885,730	1,083,242	1,024,116
Miscellaneous	559,683	419,005	706,464	1,028,185	1,031,528	765,697
Total	**16,161,596**	**14,055,208**	**12,902,996**	**16,118,333**	**19,752,782**	**17,140,967**
From War Appropriation for Military Hospitals	–	–	8,492,504	4,337,127	1,217,892	798,527
Grand total	–	–	**21,395,500**	**20,455,460**	**20,970,674**	**17,939,494**

REVENUE.

Slides and booms	97,142	26,188	16,763	48,133	[1]	[1]
Graving docks	64,919	56,484	72,428	81,148	64,918	112,194
Rents	94,729	106,205	101,664	143,355	128,148	111,111
Telegraph lines	191,453	204,878	231,332	277,749	330,470	290,131
Casual revenue	45,017	27,737	108,295	81,073	199,583	180,691
Ferries	–	–	–	1,632	2,010	2,093
Total	**493,260**	**421,492**	**530,482**	**633,090**	**725,129**	**696,220**

[1] In 1920–1921, the slide and boom works were leased or transferred to operating companies.

Harbour Commissions.

A number of the harbours of Canada are administered by corporate bodies known as Harbour Commissions. Each Commission is constituted by a special Act of the Dominion Parliament, the number of Commissioners varying from three to five. The property of the Crown in the harbour is placed under the jurisdiction of the Commission and the Commissioners are authorized to acquire and hold real and personal property for the improvement and development of the harbour; but any property acquired from the Crown may not be alienated or in any way disposed of by the Commissioners without the consent of the Governor in Council. The Commissions are given power to make by-laws for all purposes of governing the harbour, and for the imposition and collection of rates on vessels and on cargo landed and shipped in the harbour, and penalties for infraction of their by-laws (but every such by-law must be confirmed by the Governor in Council before becoming effective), and they have control of the expenditure of the revenue received from these sources. For the purpose of harbour development and the construction of improve-

ments, the Commission may, with the consent of the Governor in Council, expropriate land and borrow money on debentures issued against the security of the real and other property of the harbour. For the harbours of Quebec, Montreal and Vancouver, the Dominion Government has advanced the Commissioners large sums against such debentures. All the Commissions are under the direct inspection of an official of the Marine Department and are subject to the jurisdiction of the Minister of Marine and Fisheries in all matters.

The following harbours are administered by a Commission, the date of the Act under which each Commission received its present constitution and powers being given:—Montreal, 1894; Quebec, 1899; Three Rivers, 1882 (amended 1923); Toronto, 1911; Hamilton, 1912; Belleville, 1889; Winnipeg and St. Boniface, 1912; Vancouver, 1913; New Westminster, 1913; North Fraser, 1913. The harbours of North Sydney and Pictou, Nova Scotia, were formerly under the Commission form of administration, but the legislation providing for Commissions in these harbours was repealed and all property and rights held by the Commissioners were re-vested in His Majesty by legislation passed in the years 1914 and 1920 respectively, repeal in each case being effective from the 1st of Jan. following.

V.—THE INDIANS OF CANADA.[1]

The Indians of Canada number about 109,000, their numbers varying but slightly from year to year. A small yearly increase is evident, however, and the popular notion that the race is disappearing is not in accordance with facts. Before they were subjected to the degenerating effects of eastern civilization and the devastating results of the many colonial wars, the numbers of both the Indians and Eskimos were undoubtedly larger, but any reliable information as to the aboriginal population during either the French or the early British *régime* is non-existent, and there is no adequate basis for a comparison between the past and present aboriginal populations.

Administration.—Indians are minors under the law, and their affairs are administered by the Department of Indian Affairs under the authority of the Indian Act. This Department is the oldest governmental organization in the Dominion, dating back to the time of the Conquest. It was originally under the military authorities, and did not become a part of the civil administrative machinery until 1845. By section 5 of the British North America Act, 1867, the Indians of Canada and the lands reserved for them came under the control of the Dominion Government, and in 1873 an Act of the Canadian Parliament (R.S., c. 81) provided that the Minister of the Interior should be Superintendent-General of Indian Affairs, and as such have the control and management of the lands and property of the Indians in Canada. The aim of the Department of Indian Affairs is the advancement of the Indians in the arts of civilization, and agents have been appointed to encourage the Indians under their charge to settle on the reserves and to engage in industrial pursuits.

The system of reserves, whereby particular areas of land have been set apart solely for the use of Indians, has been established in Canada from the earliest times. It was designed in order to protect the Indians from encroachment, and to provide a sort of sanctuary where they could develop unmolested until advancing civilization had made possible their absorption into the general body of the citizens.

[1] The letter-press under this heading is taken in the main from the article contributed by the Department of Indian Affairs to the 1921 edition. Paragraphs on the linguistic stock and tribal origin of the Indian population, their industries and occupations, their health, sanitation and dwellings, appearing on pages 786–789 of the 1921 edition, are not reprinted.

Reserves have been set aside for the various bands of Indians throughout the Dominion, and the Indians located thereon are under the supervision of the local agents of the Department. The activities of the Department, as guardian of the Indians, include the control of Indian education, health, etc., the development of agriculture and other pursuits among them, the administration of their funds and legal transactions, and the general supervision of their welfare.

The educational work of the Department is now very extensive. A total of 321 Indian schools are in operation, comprising 250 day, 55 boarding and 16 industrial schools.

The local administration of the Indian bands on the reserves scattered throughout the Dominion is conducted through the Department's agencies, of which there are in all 114. The number of bands included in an agency varies from one to more than thirty. The staff of an agency usually includes various officers in addition to the agent, such as medical officer, clerk, farm instructor, field matron, constable, stockman, etc., according to the special requirements of the agency in question. The work of the agencies is supervised by the Department's inspectors, each inspector having charge of a certain number of agencies. Expenditures upon destitute Indians are made by the Dominion Government, either from public funds or from the tribal funds of the Indians.

The Indian Act provides for the enfranchisement of Indians. When an Indian is enfranchised he ceases to be an Indian under the law, and acquires the full status of citizenship. In the older provinces, where the Indians have been longer in contact with civilization, many are becoming enfranchised. Great discretion, however, is exercised by the Government in administering this problem, as Indians who become enfranchised lose the special protection attached to their wardship, so that it is necessary to guard against premature enfranchisement.

Treaties.—In the older eastern provinces, the history of the Indians has been one of slow development with that of the community. In western Ontario and the Prairie Provinces, the situation has been different. There the rapid spread of civilization made it necessary to take prompt and effective measures to protect the moral claims of the Indians, which are recognized by the Government. Accordingly, treaties were entered into with the Indians, whereby the latter ceded to the Crown their aboriginal title and interest in the country. In consideration of such cession, the Crown agreed to set aside adequate reserves, make cash grants, provide per capita annuities, give assistance in agriculture, stock raising, hunting, trapping, etc., as particular circumstances might require, provide education for the Indian children, and otherwise safeguard the Indians' interests. These treaties have been made from time to time as occasion arose, and as new territories were opened up. The last treaty to be made, Treaty No. 11, was effected in the summer of 1921, and covered the Mackenzie River district, where it was necessary to protect the Indian interests, owing to the oil rush and consequent rapid settlement of the country. No treaty has been made with the Indians of British Columbia, but their welfare has received no less attention from the Government on that account.

Government Expenditure.—On March 31, 1922, the capital of the Indian Trust Fund, which a year earlier had amounted to $11,458,661, had declined to $11,402,577. The amounts expended from the Consolidated Revenue Fund were as follows:—voted by Parliament for the purposes of the Department, $2,756,245; annuities by statute, $191,834.

On the same date the balance to the credit of the Indian Savings Account for the funding of the annuities and earnings of pupils at industrial schools was

$127,830. Deposits and interest during the twelve months aggregated $45,868, and withdrawals $30,241.

Statistics.—Statistical tables of population, school attendance, income and agricultural activities of the Indians in Canada, are appended. The figures in Table 12 are compiled from reports of the various censuses since Confederation, while the remaining tables contain data from the last annual report of the Department of Indian Affairs.

12.—Indian Population of Canada, 1871-1921.

Provinces.	1871.	1881.	1891.	1901.	1911.	1921.
Prince Edward Island	323	281	314	258	248	235
Nova Scotia	1,666	2,125	2,076	1,629	1,915	2,048
New Brunswick	1,403	1,401	1,521	1,465	1,541	1,331
Quebec	6,988	7,515	13,361	10,142	9,993	11,566
Ontario	12,978	15,325	17,915	24,674	23,044	26,436
British Columbia	23,000	25,661	34,202	28,949	20,134	22,377
Manitoba				16,277	7,876	13,869
Saskatchewan					11,718	12,914
Alberta	56,000	56,239	51,249	26,304	11,630	14,557
Yukon Territory				3,322	1,489	1,390
Northwest Territories				14,921	15,904	3,873[1]
Total	**102,358**	**108,547**	**120,638**	**127,941**	**105 492**	**110,596**

[1] The smaller Indian population of the Northwest Territories in 1921 is to be ascribed to the extension of the boundaries of Quebec, Ontario and Manitoba in 1912, which also accounts for the increase in their 1921 Indian populations.

13.—Attendance of Pupils at Indian Schools, by Provinces, fiscal year ended March 31, 1922.

Provinces.	Number of Schools.	Number of Pupils on Roll.			Average Attendance.	Percentage of attendance.
		Boys.	Girls.	Total.		
Prince Edward Island	2	17	21	38	18	47
Nova Scotia	14	136	140	276	128	46
New Brunswick	11	146	132	278	177	64
Quebec	31	761	778	1,539	956	62
Ontario	91	1,933	1,692	3,625	2,384	66
Manitoba	46	905	899	1,804	1,178	65
Saskatchewan	32	714	730	1,444	1,039	72
Alberta	25	588	615	1,203	916	76
British Columbia	58	1,276	1,229	2,505	1,646	66
Yukon	4	49	59	108	64	59
Northwest Territories	7	80	121	201	162	81
Total	**321**	**6,605**	**6,416**	**13,021**	**8,668**	**67**

14.—Acreage and Value of Indian Lands, by Provinces, 1922.

Provinces.	Total acreage of reserves.	Land cleared but not under cultivation.	Land under cultivation.	Value of Lands.
	Acres.	Acres.	Acres.	$
Prince Edward Island	1,527	400	401	20,000
Nova Scotia	21,681	3,059	1,635	81,894
New Brunswick	20,782	1,562	1,697	70,600
Quebec	175,220	15,189	10,079	1,409,895
Ontario	1,046,088	74,986	66,570	4,978,386
Manitoba	415,477	115,794	12,581	2,933,273
Saskatchewan	1,181,349	778,190	45,520	12,623,673
Alberta	1,307,343	869,237	55,723	17,188,881
British Columbia	732,216	279,774	32,217	12,927,167
Total	**4,901,683**	**2,138,191**	**226,423**	**52,233,769**

15.—Area and Yield of Field Crops of Indians, by Provinces, 1922.[1]

Provinces.	Wheat.		Oats.		Other Grain.	
	Acres.	Bush.	Acres.	Bush.	Acres.	Bush.
Prince Edward Island	13	195	40	740	–	–
Nova Scotia	4	92	46	1,085	2	29
New Brunswick	11	155	95	940	26	370
Quebec	343	4,855	2,991	40,380	1,224	13,971
Ontario	3,303	30,368	10,821	104,512	3,159	38,736
Manitoba	3,560	33,569	2,574	33,079	924	12,559
Saskatchewan	13,162	186,388	15,498	307,102	729	14,376
Alberta	11,086	80,776	9,078	134,995	701	13,667
British Columbia	2,089	58,728	4,178	123,911	280	7,826
Total	**33,571**	**395,126**	**45,321**	**746,744**	**7,045**	**101,534**

Provinces.	Potatoes.		Other Roots.		Hay and Fodder.
	Acres.	Bush.	Acres.	Bush.	Tons.
Prince Edward Island	11	1,034	–	–	53
Nova Scotia	111	5,029	14	655	545
New Brunswick	63	5,960	16	520	238
Quebec	1,090	37,463	111	4,485	2,909
Ontario	1,788	83,989	502	18,314	26,594
Manitoba	447	30,413	71	2,199	16,756
Saskatchewan	197	23,083	36	2,379	32,642
Alberta	136	11,648	38	1,031	18,091
British Columbia	2,584	321,106	890	46,018	23,223
Total	**6,427**	**519,725**	**1,678**	**75,601**	**121,051**

[1]Season of 1921.

16.—Numbers of Farm Live Stock of Indians, with Total Values, by Provinces, 1922.

Provinces.	Horses.	Cattle.	Poultry.	Value of Live Stock and Poultry.
	No.	No.	No.	$
Prince Edward Island	14	43	198	3,500
Nova Scotia	75	266	935	16,580
New Brunswick	42	69	455	7,045
Quebec	1,007	4,644	14,014	232,225
Ontario	4,292	10,073	62,146	601,045
Manitoba	1,830	3,244	3,800	227,553
Saskatchewan	2,486	7,116	6,933	796,965
Alberta	12,875	6,462	2,083	603,318
British Columbia	14,527	17,246	34,140	1,077,178
Total	**37,148**	**49,163**	**124,704**	**3,565,409**

17.—Sources and Values of Income of Indians, 1922.

Provinces.	Value of			Received from Land Rentals	Earned by			Total Income of Indians.
	Farm Products including Hay.	Beef Sold or used for food.	Wages Earned.		Fishing.	Hunting and Trapping.	Other Industries.	
	$	$	$	$	$	$	$	$
Prince Edward Island	4,500	750	1,450	–	750	600	5,100	13,150
Nova Scotia	16,887	3,644	62,890	63	9,665	7,603	40,145	141,853
New Brunswick	8,600	500	26,540	509	4,210	2,300	5,425	50,194
Quebec	177,392	38,227	347,290	28,508	6,610	245,185	74,706	936,318
Ontario	625,452	50,374	889,355	64,107	197,185	328,505	122,412	2,596,206
Manitoba	159,202	16,035	141,215	10,764	59,855	364,885	51,900	875,961
Saskatchewan	437,662	74,619	118,878	49,242	25,750	109,080	115,618	1,068,640
Alberta	270,038	51,198	124,179	54,658	13,605	186,716	90,716	927,581
British Columbia	694,438	61,026	555,968	95,950	488,290	379,620	288,460	2,586,861
Total	**2,394,171**	**296,373**	**2,267,765**	**303,801**	**805,920**	**1,624,494**	**794,482**	**9,196,764**

VI.—DEPARTMENT OF SOLDIERS' CIVIL RE-ESTABLISHMENT.

Under Order in Council of June 30, 1915, the "Hospital Commission" was created to provide for the treatment of returning wounded and disabled soldiers, and in October of that year a revised Order in Council changed its name to "Military Hospitals Commission," and empowered it to carry on vocational training, and to deal with the subject of employment.

Two Orders in Council were passed on February 21, 1918, one creating the Department of Soldiers' Civil Re-establishment, and the other charging the Department of Militia and Defence with all active treatment cases except those suffering from tuberculosis, insanity and other diseases likely to be of long duration. This arrangement was confirmed by the Department of Soldiers' Civil Re-establishment Act, 1918 (8-9 Geo. V, c. 42).[1]

The earlier activities of the Department of Soldiers' Civil Re-establishment have been described in the Year Book of 1920, pp. 21-29, to which the reader is referred for a general idea of the work of the Department in providing medical treatment, vocational training, retraining of the blind, provision of artificial limbs and appliances, and post-discharge dental treatment. These activities naturally reached their maximum in the period following the armistice, the number of employees of the Department being 9,035 in March, 1920. The total personnel employed on Dec. 31, 1921 was 4,886; this number was reduced by 1,063 to a total of 3,823 on Dec. 31, 1922.

At the close of the calendar year 1922, the Department of Soldiers' Civil Re-establishment was directly operating 15 hospitals and sanatoria with a total bed capacity of 3,857. In-patients on December 31, 1922, numbered 3,684 and out-patients 258. In all of these hospitals dietitians who make monthly reports on food costs have been placed; an elaborate system of cost accounting is maintained.

Two psychopathic hospitals are now being operated by the Department, one at Westminster, near London, and the other at Ste. Anne de Bellevue, Que. Here all classes of nervous and mental diseases are treated, and the most up to date methods, including continuous baths and other hydrotherapeutic installations, are in use. There is also equipment for occupational therapy, including both indoor and outdoor work of a constructive nature, as well as ward classes for bed patients and for those who are otherwise confined to the wards. To this work is detailed a special medical officer whose duty is to survey all patients and to make individual studies from the viewpoint of their physical and mental equipment, also of their occupational capacity and adaptability. The Department also has patients in a large number of provincial hospitals for the insane, and keeps close supervision, through the Neuropsychiatric Branch of the Medical Service, over the treatment of these patients and the conditions under which they are living. On December 31, 1922, the number of neuropsychiatric patients on strength was: mental, 1,103; nervous, 563; total, 1,666.

A brief summary of recent legislation concerning the Department of Soldiers' Civil Re-establishment is appended, together with the more important findings of the Royal Commission which sat in Ottawa during the latter part of the year 1922 to investigate certain charges brought against the Board of Pension Commissioners.

[1] Since the D. of S.C.R. Act is a skeleton only and provides for regulations to be promulgated by the Governor-General in Council on the recommendation of the Minister, the various Orders in Council passed under this authority practically constitute the laws as applied to the care and treatment of former members of the C.E.F.

In very abbreviated form the principal items of recent legislation were as follows:—

1. Provision was made for compensation to be paid to relatives or dependants of airmen in the public service of Canada in the event of death or injury while so employed.

2. In view of the fact that serious unemployment existed, reducing certain former members of the forces to a condition of distress, it was decided that assistance should be rendered to any relief issued by municipalities and charitable and veteran organizations. Maximum payments were stipulated.

3. Aid to former members of the forces in the United Kingdom, both in case of those desiring to return to Canada and of those in indigent circumstances, was provided for, such aid to be in the form of loans.

4. The medical treatment, vocational training and general care by the Department of former members of the forces, hitherto extended only to those suffering from disabilities attributable to war service, was extended to others where only a possibility existed that disability was due to this cause, with provision for the payment of subsistence, loss of wages, etc.

5. The payment of $10,000 to the Last Post Fund was authorized, to provide for the burial of indigent ex-members of the forces and administration of the work.

The following are, in the main, the findings of the Royal Commission on Pensions and Re-establishment:—

(1) No evidence was presented to indicate the existence of conspiracy, plot or ulterior motive in the administration of the Pension Act. (2) Amendments should be made to the Pension Act, to render it absolutely clear that former members of the C.E.F. and their dependants would be entitled to pension in respect of any disabilities attributable to war service. (3) Appeal tribunals should be instituted to decide on eligibility for receipt of treatment or pension, and on pension awards.[1] (4) Cases of unsuccessful applications for insurance should be reviewed with subsequent action, if justified. (5) The time allotted for applications for insurance should terminate on Sept. 1, 1923. (6) There should be attached to each office of the Department a special soldiers' advisor to assist former members of the forces in the preparation and presentation of their claims.

Several amendments to the Pension Act and the Soldiers' Civil Re-establishment Act were proposed by the House of Commons, but were subsequently struck out by the Senate. These Acts now remain unchanged in their important details.

War Pensions.—A Board of Pension Commissioners for Canada, consisting of three members, was created by Order in Council of June 3, 1916, (P.C. 1334), with exclusive jurisdiction and authority to deal with the granting and payment of naval and military pensions and other allowances to persons in the Canadian Naval Forces and the Canadian Expeditionary Force and to their dependants.

Under Orders in Council of April 12, 1921, (P.C. 1187), Aug. 17, 1921, (P.C. 2722), and Dec. 1, 1921, (P.C. 4500), and under authority of the Pension Act of 1919 (9-10 Geo. V, c. 43), the administration of the head office of the Board of Pension Commissioners was transferred to the Department of Soldiers' Civil Re-establishment as from April 1, 1921, the Pension Commissioners, however, continuing to exercise full power and authority in dealing with the granting and renewing of, and adjudication upon pensions.

[1] On the matter coming before Parliament, one appeal board only, The Federal Appeal Board, was created. It is composed of a chairman, two members to hold office for three years, and two members appointed for two years. It has no jurisdiction over pension awards.

Brief statistics are appended to illustrate the growth of the activities of the Board of Pension Commissioners. The total number of pensions in force increased from 25,823 to 63,057 during the fiscal years 1918 to 1923, and the total liability from $7,273,728, or an average of $282 per pension, to $30,421,766, or an average of $482 per pension. While pensions paid to dependants during the six-year period practically doubled in number, those paid on account of disabilities showed an increase of nearly threefold. Liability under dependants' pensions during the same period showed a threefold increase, while disabilities' pensions had increased in 1923 to practically six times their 1918 total, a comparatively greater rate of increase than that shown in the case of pensions paid to dependants. It will be noticed that, following the increase of pensions liability to a total of $31,184,838 at the close of the fiscal year 1921, a decrease of some $700,000 is shown down to the close of the fiscal year 1923. Total expenditure on pensions on account of the late war for the period Aug. 4, 1914, to Mar. 31, 1923, amounted to $151,751,591.

PENSIONS IN FORCE AS AT MAR. 31, 1918-1923.

Years.	Dependants.		Disabilities.		Total.	
	No. of Pensions.	Liability.	No. of Pensions.	Liability.	No. of Pensions.	Liability.
		$		$		$
1918	10,488	4,168,602	15,335	3,105,126	25,823	7,273,728
1919	16,753	9,593,056	42,932	7,470,729	59,685	17,063,785
1920	17,823	10,841,170	69,203	14,335,118	87,026	25,176,288
1921	19,209	12,954,141	51,452	18,230,697	70,661	31,184,838
1922	19,606	12,687,237	45,133	17,991,535	64,739	30,678,772
1923	19,794	12,279,621	43,263	18,142,145	63,057	30,421,766

18.—Number of Pensions in Force on March 31, 1923, by Relationship of Dependants and Rank of the Disabled, and Annual Liability incurred thereon.

Pensions to Dependants.			Pensions for Disabilities.		
Classification.	Number of Pensions.	Yearly Liability.	Classification.	Number of Pensioners.	Yearly Liability.
		$			$
Widows	8,268	7,710,376	Privates	36,509	15,306,619
Mothers	5,726	2,504,150	Sergeants	3,947	1,610,215
Children	2,719	813,180	R.S.M's	167	62,811
Parents (both)	1,232	523,742	W.O's	44	17,737
Fathers	1,082	347,915	Lieutenants	1,206	496,870
Orphans	620	329,482	Captains	711	318,505
Brothers and Sisters	84	24,324	Majors	327	159,142
Grandparents	43	19,274	Lt.-Colonels	105	67,239
Orphan Brothers and Sisters	10	3,348	Colonels	11	8,831
Others	10	3,840	Brig. Generals	8	8,508
			Nurses—Lieuts	226	85,368
Total	**19,794**	**12,279,631**	Nurses—Capts	2	300
			Total	**43,263**	**18,142,145**
			Total Annual Liability	—	**30,421,776**

The scale of pensions has been revised several times by Orders in Council and Acts of Parliament. Under the existing scale of pensions for disability, as established by c. 45 of the Statutes of 1921, twenty classes are provided, ranging from 100 p.c. of total disablement to 5 p.c. of disablement. The pensions range, for the rank and file, according to the class of disablement, from $600 down to $30 per annum (with a bonus of 50 p.c. of these amounts during the years commencing September 1, 1921, 1922 and 1923). The pensions for total disablement range from $600 for the rank and file up to $2,700 for persons of, and above the rank of commodore or brigadier-general. Married members of the forces receive additional amounts, ranging from $300 per annum for 100 p.c. of disablement to $15 per annum for 5 p.c. of disablement. Similarly, for disabled soldiers with children there is an additional pension ranging from $180 to $9 for the first child, from $144 to $9 for the second child, and from $120 to $6 for other children. No pension is paid in respect of boys over 16 or girls over 17 except in case of their physical or mental infirmity, or where the child is making satisfactory progress in a course of instruction approved by the Commission, when the pension may be paid until the child has reached the age of 21. The existing scale of pensions in cases of death is given in Table **19** and in cases of disability in Table **20**.

19.—Scale of Annual Pensions granted to Dependants of Deceased Sailors and Soldiers of the Canadian Naval Forces and the Canadian Expeditionary Force, as effective on Sept. 1, 1923.

Rank or Rating of Member of Forces.	Rate per Annum.		
	Widow or Dependent Parents.	Child or Dependent Brother or Sister.	Orphan child or Orphan Brother or Sister.
	$ cts.	$ cts.	$ cts.
All ratings below Petty Officer (Naval); Rank and file (Military)..	480 00[1]	–	–
Bonus.	240 00[1]	–	–
Chief Petty Officer and Petty Officer (Naval); Squad, Battery or Company Sergt.-Major and Q.M. Sergeant (Military); Sergt., including Staff-Sergt. and Colour Sergt. (Military).....	510 00[1]	–	–
Bonus.	210 00[1]	–	–
Naval Cadet and Midshipman (Naval); Master Gunner not W.O. (Military); Regimental Sergt.-Major not W.O. (Military); Regimental Q.M. Sergeant (Military).....	620 00[1]	–	–
Bonus.	100 00[1]	–	–
Warrant Officer and Chief Warrant Officer (Naval); Warrant Officer (Military).....	680 00[1]	–	–
Bonus.	40 00[1]	–	–
Sub-Lieutenant (Naval); Lieutenant (Military).....	720 00[1]	–	–
Lieutenant (Naval); Captain (Military).....	800 00[1]	–	–
Lieutenant Commander (Naval); Major (Military).....	1,008 00[1]	–	–
Commander and Captain under three years' seniority (Naval); Lieutenant-Colonel (Military).....	1,248 00[1]	–	–
Captain (Naval); Colonel (Military).....	1,512 00[1]	–	–
Commodore and higher ranks (Naval); Brigadier-General and higher ranks (Military).....	2,160 00[1]	–	–
Additional pension for children or dependent brothers or sisters for above ranks.....	First.....	180 00[1]	360 00[1]
	Second.....	144 00[1]	288 00[1]
	Subsequent.	120 00[1]	240 00[1]

[1] Pensions awarded to parents or brothers and sisters may be less than these amounts in accordance with the provisions of this Act.

20.—Scale of Annual Pensions to Disabled Sailors and Soldiers of Force, as effective for years commencing September

PERCENTAGE OF DISABILITY AND AMOUNT

Rank or Rating of Member of Forces.	Rate per Annum.	Class 1 Total 100%.	Class 2 — 99–95%.	Class 3 — 94–90%.	Class 4 — 89–85%.	Class 5 — 84–80%.	Class 6 — 79–75%.	Class 7 — 74–70%.	Class 8 — 69–65%.
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
All Ratings below Petty Officer (Naval); Rank and File (Military)	Pension	600 00	570 00	540 00	510 00	480 00	450 00	420 00	390 00
	Bonus	300 00	285 00	270 00	255 00	240 00	225 00	210 00	195 00
Chief Petty Officer and Petty Officer (Naval); Squad, Battery or Company Sergt.-Major and Q.M. Sergeant (Military); Sergeant, including Staff Sergt. and Colour-Sergt. (Military)	Pension	637 50	605 63	573 75	541 88	510 00	478 13	446 25	414 38
	Bonus	262 50	249 37	236 25	223 12	210 00	196 87	183 75	170 62
Naval Cadet and Midshipman (Naval); Master Gunner not W.O. (Military); Regimental Sergt. Major not W.O. (Military;) Regimental Q.M. Sergt. (Military)	Pension	775 00	736 25	697 50	658 75	620 00	581 25	542 50	503 75
	Bonus	125 00	118 75	112 50	106 25	100 00	92 75	87 50	81 25
Warrant Officer and Chief Warrant Officer (Naval); Warrant Officer (Military)	Pension	850 00	807 50	765 00	722 50	680 00	637 50	595 00	522 50
	Bonus	50 00	47 50	45 00	42 50	40 00	37 50	35 00	32 50
Sub-Lieutenant (Naval); Lieutenant (Military)	Pension	900 00	855 00	810 00	765 00	720 00	675 00	630 00	585 00
Lieutenant (Naval); Captain (Military)	"	1,000 00	950 00	900 00	850 00	800 00	750 00	700 00	650 00
Lieutenant Commander (Naval); Major Military	"	1,260 00	1,197 00	1,134,00	1,071 00	1,008 00	945 00	882 00	819 00
Commander and Captain under three years' seniority (Naval); Lieutenant Colonel (Military)	"	1,560 00	1,482 00	1,404 00	1,326 00	1,248 00	1,170 00	1,092 00	1,014 00
Captain (Naval); Colonel (Military)	"	1,890 00	1,795 50	1,701 00	1,606 50	1,512 00	1,417 50	1,323 00	1,228 50
Commodore and higher ranks (Naval); Brigadier-General and higher ranks (Military)	"	2,700 00	2,565 00	2,430 00	2,295 00	2,160 00	2,025 00	1,890 00	1,755 00
Above Ranks	Additional pension for Married members of the Forces	300 00	285 00	270 00	255 00	240 00	225 00	210 00	195 00
Additional pension for children for above ranks	First child	180 00	171 00	162 00	153 00	144 00	135 00	126 00	117 00
	Second child	144 00	138 00	132 00	126 00	120 00	114 00	108 00	102 00
	Subsequent children	120 00	114 00	108 00	102 00	96 00	90 00	84 00	78 00

The bonus payments set forth in this Schedule shall be paid during the years commencing September 1, 1922 and 1923. Members of the forces permanently disabled to a less extent than five per cent shall be entitled to a final payment not exceeding $100.

Members of the forces who are at the time of retirement or discharge, or who later become disabled to an extent of between five and fourteen per cent may elect to accept a final payment in lieu of the pensions set forth in this Schedule. The amount of such final payment in cases of disability between five and nine per cent shall not exceed three hundred dollars, and in cases of disability between ten and fourteen per cent shall not exceed six hundred dollars and shall be determined in accordance with the extent of the disability and its probable duration. Members of the forces permanently disabled between ten and fourteen per

the Canadian Naval Forces and the Canadian Expeditionary 1, 1921, 1922 and 1923, under the Pension Act.

OF PENSIONS AND ALLOWANCES.

Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Class 16	Class 17	Class 18	Class 19	Class 20
64–60%.	59–55%.	54–50%.	49–45%.	44–40%.	39–35%.	34–30%.	29–25%.	24–20%.	19–15%.	14–10%.	9–5%.
$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
360 00	330 00	300 00	270 00	240 00	210 00	180 00	150 00	120 00	90 00	60 00	30 00
180 00	165 00	150 00	135 00	120 00	105 00	90 00	75 00	60 00	45 00	30 00	15 00
382 50	350 63	318 75	286 88	255 00	223 13	191 25	159 38	127 50	95 63	63 75	31 88
157 50	144 37	131 25	118 12	105 00	91 87	78 75	65 62	52 50	39 37	26 25	13 12
465 00	426 25	387 50	348 75	310 00	271 25	232 50	193 75	155 00	116 25	77 50	38 75
75 00	68 75	62 50	56 25	50 00	43 75	37 50	31 25	25 00	18 75	12 50	6 25
510 00	467 50	425 00	382 50	340 00	297 50	255 00	212 50	170 00	127 50	85 00	42 50
30 00	27 50	25 00	22 50	20 00	17 50	15 00	12 50	10 00	7 50	5 00	2 50
540 00	495 00	450 00	405 00	360 00	315 00	270 00	225 00	180 00	135 00	90 00	45 00
600 00	550 00	500 00	450 00	400 00	350 00	300 00	250 00	200 00	150 00	100 00	50 00
756 00	693 00	630 00	567 00	504 00	441 00	378 00	315 00	252 00	189 00	126 00	63 00
936 00	858 00	780 00	702 00	624 00	546 00	468 00	390 00	312 00	234 00	156 00	78 00
1,184 00	1,039 50	945 00	850 50	756 00	661 50	567 00	472 50	378 00	283 50	189 00	94 50
1,620 00	1,485 00	1,350 00	1,215 00	1,080 00	945 00	810 00	675 00	540 00	405 00	270 00	135 00
180 00	165 00	150 00	135 00	120 00	105 00	90 00	75 00	60 00	45 00	30 00	15 00
108 00	99 00	90 00	81 00	72 00	63 00	54 00	45 00	36 00	27 00	18 00	9 00
96 00	90 00	84 00	78 00	72 00	63 00	54 00	45 00	36 00	27 00	18 00	9 00
72 00	66 00	60 00	54 00	48 00	42 00	36 00	30 00	24 00	18 00	12 00	6 00

cent shall receive six hundred dollars. Members of the forces permanently disabled between five and nine per cent shall receive three hundred dollars. If an election has been made to accept a final payment, such election is final unless the disability of the member of the forces concerned becomes greater in extent, in which case the pension shall be adjusted for the past period in accordance with the extent of the disability, and the amount paid as a final payment shall be deducted. If a married pensioner desires to elect to accept a final payment the consent of his wife must be secured. All payments of pension made subsequent to the time at which an award of fourteen per cent or under is made shall be deducted from the amount of the final payment.

Returned Soldiers' Life Insurance.—Under the Returned Soldiers' Insurance Act of 1920 (10-11 Geo. V, c. 54), a system of life insurance at very favourable rates was established for returned soldiers, whose lives might not be considered as insurable by life insurance companies. The general features of the scheme were described on pages 38-40 of the 1920 Year Book, to which the reader is referred. Up to Nov. 30, 1923, the number of applications received and approved was 33,728. Policies in force numbered 32,476, having a total value of $55,155,000.

The total value of death claims payable up to Oct. 31, 1923, was $2,107,000. Of the 670 claims due up to this date, 463 had been settled by cash payments or annuities involving an amount of $1,546,213. Policies cancelled up to the end of October, 1923, numbered 149 ($387,787), while lapses totalled 6,107, a value of $14,636,500. Reinstatements reduced net lapses to 2,096 ($4,989,500). A statement of income and expenditure, as at Oct. 31, 1923, shows a balance from operation of $1,503,956

VII.—MISCELLANEOUS ADMINISTRATION.

1.—The Soldier Settlement Board.

The Canada Year Book, 1921, contains, on pages 809 and 810, a statement regarding the establishment and early proceedings of the Soldier Settlement Board.

From the inception of the Board's operations to the end of the fiscal year 1922-23, the number of war veterans who have come under the Act is 28,984. These are divided into two classes:—(1) those who have received financial aid in the way of loans to enable them to purchase land, live stock and machinery, and to erect buildings, fences, etc., numbering 22,626, and (2) those who have taken up free Dominion lands and may be eligible for financial assistance for the purchase of stock and equipment, 6,358 in number.

A total of $94,733,548 has been disbursed by the Board on behalf of these soldier settlers in the following manner:—

For Land Purchase	$56,354,485
For Removal of Encumbrances	2,209,637
For Permanent Improvements	9,198,842
For Stock and Equipment	25,084,600
For Seed, Feed, Insurance, etc	642,980
For Special Advances	406,181
For Replacements	455,953
For Indian Soldier Settlement	380,870
Total	$94,733,548

Monies repaid to the federal treasury by soldier settlers total $15,243,167, of which $5,463,242 was for initial payments made on purchase of land, and the balance for interest and principal.

At the close of the fiscal year $1,629,915, or 54·5 p.c. of the amount due the Board by settlers, was paid in on account of interest and principal charges due the previous fall. The Province of Ontario made the best showing with payments amounting to 91·3 p.c. of the amount due, but this included some prepayments. The district of Regina was second with 77·6 p.c., while the district of St. John, embracing the three Maritime Provinces, reported payments of 68·8 p.c. The district of Calgary (Southern Alberta) was lowest with 37·5 p.c., and Northern Alberta next with 39 p.c. It may be re-stated here that Parliament, in the session of 1922, amended the Act with respect to repayments, by granting certain interest exemptions to settlers who were established when prices were at their peak. For

example: settlers who went on the land prior to October 1, 1919, were granted four years' exemption, that is, from October 1, 1922, to October 1, 1926; those established from October 1, 1919, to October 1, 1920, three years' exemption; and those established from October 1, 1920, to October 1, 1921, two years' exemption; so that not until October 1, 1926, will full interest on the amount loaned be chargeable. Further relief was granted by spreading the payments for stock and equipment over a period of 25 years instead of 4 and 6 years as under the old Act.

A number of settlers (583) have completely discharged their financial obligations to the Board, of whom 312 have continued to operate their farms.

Of the settlers to whom advances were made, 14·5 p.c. had discontinued their farming operations. Twenty per cent of the failures have been due to causes beyond the control of the settlers, such as death, ill-health or a recurrence of physical disability due to the war. The major portion of them failed because of unsuitability, either of the land or the individual. A number of the farms which have come back into the hands of the Board have been resold to returned soldiers and civilians. In the case of 978 farms completely sold out, that is, the land as well as the stock and equipment sold, the amount realized for the land was $375,229 more than the original cost to the Board. In 78 other cases where the land was sold but stock and equipment not sold, the amount realized for the land was $12,445 in excess of original cost. From March 31, 1921, to March 31, 1923, 991 parcels of land were disposed of, the whole showing a substantial increase over original purchase price. In view of the limited demand for farm property, owing to the general depression in agriculture, the resale of so many farms at a profit show that the Board was, on the whole, successful in securing land for its soldier applicants at reasonably low figures.

2.—Scientific and Industrial Research in Canada.[1]

Prior to 1870 the basis of research in Canada was observation and record rather than experiment. Fifty years ago, laboratories, except elementary ones of scant accommodation, were non-existent. The courses in science in the universities did not, before 1878, involve any practical work beyond extremely simple demonstrations. The industries did not concern themselves with scientific investigation, and research was not regarded as an essential feature of the work of the Government Departments, except possibly in the Geological Survey.

Scientific research in Canada began in the "eighties" with the institution in the universities of courses in experimental and practical science. Many of the investigators of Canadian origin who have distinguished themselves in the field of science within the last thirty years owe their stimulus toward research to the outlook developed by these new courses.

Since 1890 Canadian universities have steadily increased their equipment for scientific teaching and research. While many of the teachers have had little time for research or for advanced courses, scientific investigators in Canadian universities have made valuable contributions to the literature of the sciences, and many of them have achieved high distinction.

Scientific societies, such as the Royal Canadian Institute, founded in 1848, and the Royal Society of Canada, founded in 1881, also promoted research through the publication of papers giving the results of researches in the various departments of science, and through the distinction conferred by membership in such societies.

Various departments of the Dominion and Provincial Governments have maintained scientific laboratories. Some of these have been concerned merely

[1] Contributed by the Honorary Advisory Council for Scientific and Industrial Research.

with routine examination or analysis, but, in many cases, research was undertaken. The research activities of the Government departments have, however, been inadequate to meet the needs of the situation. Less than five years ago, it was estimated that the amount expended annually by Government laboratories for investigations of all kinds was less than $325,000, of which less than $100,000 was actually expended for research in Government laboratories.

Twenty years ago the value of research was not appreciated by Canadian industries. A number of firms had routine testing or assay laboratories, but until 1905 there were none which employed research for the improvement of their manufacturing processes or of their products. The example of foreign firms has to some extent altered public opinion in Canada on this question, but the number of Canadian firms which apply research to their industrial problems is still very small. In 1917 the Research Council of Canada issued a questionnaire to the industries. Replies received from 2,400 of the leading firms in Canada showed that of this number only 37, with as many directors and 124 assistants, had laboratories for research. Eighty-three firms employed as many investigators and 276 assistants, but the great majority of these were engaged only in routine examinations. Apart from salaries, the total amount expended in 1916 for research by all firms listed, did not exceed $135,000.

The Research Council of Canada.

The great war brought home to the British Empire the national importance of scientific research. When trade relations were broken by the outbreak of war, there followed almost immediately a scarcity of many essential materials, and, owing to the lack of scientific knowledge regarding satisfactory substitutes and the processes involved in key industries, confusion and paralysis ensued, and the extent to which the Empire had become dependent upon foreign monopolies was at once apparent. Steps were immediately taken to meet this situation. A committee of the Imperial Privy Council was appointed and, under it, an Advisory Council for Scientific and Industrial Research was established early in 1915 by the British Government to deal with the development of scientific and industrial research and its application to the problems of war and of peace. The British Dominions were invited to establish similar organizations, in order to bring about co-operation of effort and co-ordination of research throughout the Empire. Acting upon this suggestion, the Government of Canada appointed, in 1916, a Sub-Committee of the Privy Council to devise and carry out measures to promote scientific and industrial research, in order that Canadian industries might be in a position to supply Canadian needs and to extend Canadian trade abroad.

Under this Sub-Committee of the Privy Council, there was constituted, late in 1916, the Honorary Advisory Council for Scientific and Industrial Research, composed of eleven men distinguished in the scientific and industrial world. To this Advisory Council, more commonly known as the Research Council of Canada, were assigned the following duties:

(a) To ascertain and tabulate the various research agencies in Canada.
(b) To note and schedule the researches and investigations.
(c) To co-ordinate all research agencies, so as to prevent overlapping.
(d) To tabulate the technical and scientific problems that confront Canadian industries.
(e) To study the unused natural resources of Canada and the by-products of all basic industries.
(f) To increase the number of trained research men.
(g) To stimulate the public mind in regard to the importance and utility of scientific research.

The Research Council, in order to ascertain the equipment and man-power available in Canada for research and for the solution of the technical problems confronting Canadian industries, at once made what might be termed a research inventory of the Dominion. This established the facts that Canada was far behind in the scientific development of her industries, and that Canadians needed to be educated to the advantages of research.

To meet this situation, the Research Council proceeded to develop its work in the three following directions:—

(a) Recognizing that there was but a very limited number of highly trained men available for industrial research in the Dominion, the Research Council established a number of fellowships, studentships and bursaries having an annual value of $1,200, $1,000 and $750 respectively, to be held only by university graduates. A man (or woman) who has shown a marked aptitude in research may be appointed to a bursary tenable for one year, and may in subsequent years be promoted to a studentship and then a fellowship. These students follow their courses of advanced study and obtain their training in research at one or other of the larger universities of Canada. Up to the present time 146 of these awards have been made to 96 persons, and those who held these bursaries, studentships or fellowships are now almost without exception holding positions in industrial companies in Canada or in Canadian universities, and devoting their time wholly or in part to the work of research. On these grants the Research Council expends annually a sum not exceeding $40,000, or one-third of its annual grant of $120,000 from the Dominion Parliament.

(b) The Research Council has inaugurated a number of very important researches, such as that on the utilization of Canadian peat carried out at the Alfred bog near Ottawa under the Peat Board, and that on the briquetting of the low grade lignite of southeastern Saskatchewan at Bienfait, near Estevan, now being conducted by the Lignite Utilization Board. It has also made 93 grants for research into questions of special importance to Canadian industry, representing an expenditure of about $175,000.

(c) In order to develop an interest in research everywhere throughout the Dominion and at the same time to mobilize for the purpose of research all the available forces in Canada, the Research Council has associated with itself eleven associate or advisory committees, composed of the leaders in various branches of science in the Dominion and comprising 145 persons, all of whom serve without remuneration.

National Research Institute.

The Research Council, however, recognizes that in order to develop its work the establishment of a national research institute is necessary. If such an institute were erected and endowed, the Council would be in a position to organize the various industries of the Dominion—many of whom now carry on a certain amount of research work, and all of which could profit by it—in a wide scheme of industrial research, the Government supplying well-equipped laboratories and shops under a director and one or two assistants of extended and successful experience, while the industries would provide the salaries of the skilled workers and the additional outlay required for the solution of the special problems which they would bring to the institute.

This plan was recommended to the Government by the Research Council, and a special committee of the House of Commons was appointed to investigate and report upon this recommendation. The committee studied the proposal for two

sessions of Parliament and heard a great many witnesses, several of whom were men eminent for scientific knowledge and attainment, and finally, on April 27, 1920, brought in its final report, making the following recommendations:—

"1. That a National Research Institute for Canada, endowed with the functions and of the character indicated in the foregoing, be established in the vicinity of Ottawa, on a site fifty acres in area, of easy access and conveniently located for water, gas and electric power supply.

2. That the first building to be erected for the Institute should be of the best modern construction, suitable for laboratory work, and of such dimensions as to provide accommodation for some years to come.

3. That there be appropriated by Parliament $500,000 for the purchase of the site and the construction of the building, $100,000 for the scientific equipment of the Institute, and $50,000 for salaries and maintenance during the first year of its operation.

4. That legislation be enacted at this session to provide for the establishment of this National Research Institute and the government of the same."

A bill for the establishment of such an Institute was passed by the House of Commons on May 3, 1921, but failed to receive the approval of the Senate.

In other countries, research institutes have been or are being founded. Among those already in operation, are the National Physical Laboratory of Great Britain, the Bureau of Standards, with its Industrial Research Institute, at Washington, the Commonwealth Institute of Science and Industry for Australia, the Cawthron Institute for New Zealand, the National Institute of Japan, the Physikalische-Technische Reichs-Anstalt of Charlottenburg and the Chemical Institute at Dahlem, Germany, and the Research Institute at Brussels for Belgium. Beside the Central Research Institute at Dehra Dun in India, which is to be enlarged to cover industrial research on a semi-commercial scale, the Government of India has accepted a proposal to found another research institute, and the establishment of a Research Institute for Burmah is now under consideration. Almost everywhere there is a recognition of the value of scientific research in the promotion of national prosperity—scientific research, not casually pursued as in the past, but organized and directed to the economic utilization of the natural resources of each country and the promotion of human welfare. Canada cannot be indifferent to this situation; and the Research Council feels that the establishment of a National Research Institute is the first and the earliest measure that should be taken to put Canada in a position to develop her natural resources and to hold her own in the competition for the trade of the world.

3.—Department of the Secretary of State.

The Department of the Secretary of State was constituted in its present form in 1873 through the merging of the previously-existing offices of the Secretaries of State for Canada and for the Provinces. The Secretary of State is the official mouthpiece of the Governor General, as well as the medium of communication between the Dominion and Provincial Governments, all correspondence between the two being conducted by him with the Lieutenant-Governor. He is also the custodian of the Great Seal of Canada and the Privy Seal, as well as the channel by which the general public may approach the Crown.

The Secretary of State is also the Registrar-General, registering all proclamations, commissions, charters, land patents and other instruments issued under the Great Seal. He is further charged with the administration of the Companies Act, the Canada Temperance Act and the Naturalization Act. The following information on these subjects has been secured in the course of administration.

Charters of Incorporation.—The number of companies incorporated under the Companies Act and amending Acts during the fiscal year 1921-22 was 875 (as against 852 in the previous year), with a total capitalization of $351,555,900 (as against $752,062,683 in the previous year). During the year Supplementary Letters Patent were granted to 127 companies, of which 43 increased their capital stock by the aggregate amount of $18,275,000, 13 decreased their capital stock by $5,121,450, the remaining 71 being granted Supplementary Letters Patent for various purposes, such as changing names, extending powers, etc. The total capitalization of new companies plus the net increase of capital of existing companies amounted to $364,709,450.

In Table 21 will be found the number and capitalization of companies incorporated during the years 1900-1922.

21.—Number of Companies Incorporated under the Companies Act and amending Acts during the calendar years 1900-1907, and for the fiscal years ended March 31, 1908-1922.

Years.	New Companies.		Old Companies.		Gross Increase in Capitalization.	Old Companies.		Net Increase of Capitalization.
	Number.	Capitalization.	Numbering.	Increase their Capital by		Numbering.	Decreased their Capital by	
		$		$	$		$	$
1900	53	9,558,900	–	3,351,000	12,909,900	–	–	12,909,900
1901	55	7,662,552	–	3,420,000	11,082,552	–	–	11,082,552
1902	126	51,182,850	–	5,055,000	56,237,850	–	–	56,237,850
1903	187	83,405,340	–	5,854,520	89,259,340	–	–	89,259,340
1904	206	80,597,752	–	3,366,000	83,963,752	–	–	83,963,752
1905	293	99,910,900	–	9,685,000	109,595,900	–	–	109,595,900
1906	374	180,173,075	–	32,403,000	212,576,075	–	–	212,576,075
1907	378	132,686,300	–	19,091,900	151,778,200	–	–	151,778,200
1908 (3 mos.)	64	13,299,000	–	865,000	14,164,000	–	–	14,164,000
1909	366	121,624,875	–	72,293,000	193,917,875	–	–	193,917,875
1910	420	301,788,300	44	46,589,500	348,377,800	4	670,600	347,707,200
1911	454	458,415,800	45	24,715,600	483,131,400	4	10,650,000	472,481,400
1912	575	447,626,999	44	42,939,000	490,565,999	7	17,880,800	472,685,199
1913	835	625,212,300	54	55,549,900	680,962,200	5	11,861,381	669,100,819
1914	647	361,708,567	61	63,599,003	425,307,570	3	3,290,000	422,017,570
1915	461	208,283,633	34	26,650,000	234,933,633	4	6,840,000	228,093,633
1916	534	157,342,800	28	68,996,000	226,338,800	11	4,811,700	221,527,100
1917	606	207,967,810	36	26,540,000	234,507,810	3	5,050,000	229,457,810
1918	574	335,982,400	41	69,321,400	405,303,800	4	1,884,300	403,419,500
1919	512	214,326,000	69	67,583,625	281,909,625	11	2,115,985	279,793,640
1920	991	603,210,850	88	85,187,750	688,398,600	10	19,530,000	668,868,600
1921	852	752,062,683	135	79,803,000	831,865,683	17	7,698,300	824,167,383
1922	875	351,555,900	43	18,275,000	369,830,900	13	5,121,450	364,709,450

Naturalizations.—The naturalizations effected under the Naturalization Act (R.S. 1906, c. 77), for the calendar years 1908-1917 inclusive, were given on page 594 of the Year Book for 1919. Since January 1, 1918, the only method of obtaining naturalization has been under what is known as the "Imperial" Naturalization Act, which came into force on January 1, 1915. This Act was known under the title of the Naturalization Act, 1914, until July 7, 1919, when it was repealed and the Naturalization Act, 1919, came into force. On July 1, 1920, the Naturalization Act, 1919, was repealed, and the Naturalization Act, 1914, was revived and amended under the title of the Naturalization Acts, 1914 and 1920. This latter Act is the one now in force. Table 22 shows the principal nationalities granted naturalization under these Acts during the calendar years from 1915 to 1922. It is a noteworthy fact that the number of certificates issued under the above Acts increased from 124 in the year 1915 to 8,773 in 1920, 11,069 in 1921 and 8,333 in 1922.

22.—Naturalizations in Canada, by Principal Nationalities, effected under the Naturalization Acts 1914-1920, during the calendar years 1916, 1917, 1918, 1919, 1920, 1921 and 1922.

Nationalities.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
Albanians	–	–	–	–	2	3	4
Americans	63	58	11	37	3,552	2,516	1,599
Arabians	–	–	–	–	1	–	1
Argentinians	–	–	–	1	–	1	2
Austrians	–	–	–	–	13	182	88
Austrians (Ukraine)	–	–	–	–	–	–	2
Austro-Hungarians	–	–	–	–	3	25	5
Belgians	1	1	8	65	102	137	132
Bohemians	–	–	–	2	–	–	–
Bolivians	–	–	–	–	–	–	1
Brazilians	–	–	–	–	2	2	5
Bulgarians	–	–	–	–	3	5	3
Chilians	–	–	–	–	–	–	1
Chinese	5	4	2	21	20	25	14
Czecho-Slovaks	–	–	–	1	102	143	99
Danes	3	12	16	115	133	171	125
Dutch	6	4	18	80	99	94	65
Dutch East Indies	–	–	1	–	–	–	–
Egyptians	–	–	–	–	–	–	2
Finns	–	–	–	17	111	152	113
French	5	3	7	128	127	158	124
Germans	–	–	1	–	112	257	195
Germans (Alsace-Lorraine)	–	–	–	–	1	–	–
Greece	6	–	4	30	161	224	260
Hungarians	–	–	–	–	7	28	31
Italians	3	1	5	156	181	428	665
Japanese	17	31	15	82	125	135	95
Jugo-Slovaks	–	–	–	–	3	2	–
Luxembourgers	–	–	1	1	6	7	3
Montenegrins	1	–	–	1	4	4	–
Nationality undetermined	–	–	–	–	–	1	–
No nationality	–	–	–	2	1	3	1
Norwegians	11	4	34	210	366	299	209
Palestinians	–	–	–	–	–	–	7
Persians	–	–	–	–	3	4	–
Poles	–	–	–	58	1,232	1,997	1,092
Pole (Ukrainian)	–	–	–	–	7	300	308
Pole (Russian)	–	–	–	–	–	3	–
Portuguese	–	–	–	1	–	1	–
Re-admission	–	–	4	4	–	–	1
Rumanians	3	2	6	55	384	872	585
Russians	6	5	9	687	1,303	2,021	1,692
Russians (Lithuania)	–	–	–	–	–	–	7
Russians (Ukraine)	–	–	–	–	–	–	12
Russians (Latvia)	–	–	–	–	–	–	2
Serbians	–	–	3	3	24	4	3
Serb-Croat-Slovaks	–	–	–	–	22	122	99
Spaniards	–	–	3	4	5	3	8
Subjects of Allied Powers	–	–	–	–	–	–	118
Swedes	14	8	37	236	384	435	276
Swiss	10	1	10	39	51	69	49
Turks	–	–	–	–	2	10	7
Turk (Armenian)	–	–	–	1	39	67	86
Turk (Assyrian)	–	–	–	–	–	3	1
Turk (Greek)	–	–	–	–	3	15	7
Turk (Macedonian)	–	–	–	–	–	1	–
Turk (Mesopotamia)	–	–	–	–	4	2	5
Turk (Palestine)	–	–	–	–	1	1	–
Turk (Syrian)	–	–	–	11	79	134	136
Venezuelans	–	1	–	–	–	–	–
Section 4[1]	2	–	–	–	2	3	–
Section 11 s.s. (c)[2] c. 38, Nat. Act, 1919	–	–	–	–	2	–	–
British in Canada	–	–	–	3	–	–	–
Total	**156**	**135**	**195**	**2,051**	**8,784**	**11,069**	**8,345**

[1] Under Section 4 of the Naturalization Act, 1914, the Secretary of State is authorized in his discretion to grant a special certificate of naturalization to any person with regard to whose nationality as a British subject a doubt exists.

[2] Resumption of British nationality by wife of alien being a subject of state at war with His Majesty.

Canada Temperance Act.—Under Parts I and II of this Act, provision is made for the prohibition of the sale of intoxicating liquors in counties and cities. On Dec. 14, 1922, a vote was taken upon the repeal of the Act in the county of Missisquoi, Quebec. The repeal was carried by a large majority and became effective from March 3, 1923. The Act was suspended by Orders in Council, dated respectively Nov. 4, 1922, and June 16, 1923, without the taking of a vote, in the counties of Digby and Guysborough, N.S. Part IV of the Act relates to the prohibition of the importation and exportation of intoxicating liquors into and from the provinces. Under this part, a further plebiscite was taken in the province of Prince Edward Island on Jan. 22, 1923. The vote was decisively in favour of prohibition, which was accordingly brought into force from May 21, 1923. Although seven provinces had previously voted for prohibition, during the autumn of 1923 the provinces of Manitoba and Alberta repealed the previously existing legislation, adopting systems of government-controlled liquor stores similar to those of Quebec and British Columbia.

4.—National Gallery.

The National Gallery of Canada was the outcome of the establishment, in 1880, by the Marquis of Lorne and H.R.H. Princess Louise, of the Royal Canadian Academy of Arts, which required the elected Academicians to deposit their diploma pictures in the National Gallery at Ottawa. The collections of pictures, statuary and other works of art now occupying premises in the Royal Victoria Museum in Ottawa consist of purchases made by means of the annual grants voted by the Dominion Parliament, the diploma works of the members of the Royal Canadian Academy, and gifts and loans by persons interested in art. In 1907 an Advisory Arts Council of three members was appointed by authority of an Order in Council, and in 1913, under the National Gallery of Canada Act (3-4 Geo. V, c. 33), the Advisory Arts Council was constituted the Board of Trustees for the management of the National Gallery and the administration of its annual grants.

In addition to the care and management of the National Gallery, the Act imposes upon the Board responsibility for "the encouragement and cultivation of correct artistic taste and Canadian public interest in the fine arts, the promotion of the interests generally of art in Canada."

Amongst the collections of oil paintings now in the National Gallery are works by such old masters as Tintoretto, Caravaggio, Andrea del Sarto, Bartholomaus de Bruyn, Luca Giordano, Cima da Conegliano, Frans Floris, Chardin, Hogarth, Snyders, Daniel Mytens. The more modern schools include representative works by the great English masters—Reynolds, Hoppner, Beechey, Lawrence, Gainsborough, Millais, Leighton, Holman Hunt. The French masters include J. F. Millet, Edgar Degas, Claude Monet, Alfred Sisley and a number of others, while the contemporary British school is strongly represented by fine examples of the work of such artists as Arnesby Brown, Laura Knight, Glyn Philpot, W. Orpen, D. Muirhead, G. Henry, Austen Brown, Adrian Stokes and many others. The Gallery includes an excellent and representative exhibition of the work of Canadian artists both past and present.

The National Gallery collections of engravings, etchings, lithographs, etc. have been developed and formed into a department of prints with a special curator at the head. Important acquisitions have recently been made of works by Mantegna, Robetta, Nicholetto, Rosex, D. Campagnola, Marcantonio, Canaletto; Master M.Z., Schongauer, Dürer, Altdorfer, Aldegrever, Pencz, Hirschvogel, Hollar;

Master W.C.I.E.F., van Dyck, van Leyden, Rembrandt, Ostade, Potter, van de Velde, Bega, Berchem, Ruysdael; Duvet, Gellee, Mellan, Morin, Nanteuil, Drevet, Jacque, Millet, Corot, Raffet, Isabey, Bonington, Meryon, Braquemond, Jacquemart, Legros, Lepere; Harding, Blake, Crome, Daniel, Wilkie, Geddes, Haden, Short, Strang, McBey, Brangwyn, Shannon, Gabain; Whistler, Zorn.

One of the most important activities of the National Gallery is its Loan Exhibition work. Under this policy the National Gallery lends to any art body or society in Canada, which possesses the necessary facilities, a collection of Canadian paintings, either for one year or for shorter periods. During 1922 nineteen (19) loans were distributed, and practically every important city in Canada has thereby gained a better knowledge of Canadian art. The aggregate value of loans made during the past five years is over $1,000,000.

After having been closed to visitors since February, 1916, during which time the halls were occupied by the Houses of Parliament, the National Gallery was re-opened on September 12, 1921, with extended premises and augmented collections of art objects. The attendance during the first year of re-opening was 106,000, and it is estimated that almost as many more viewed the various exhibitions held throughout the country.

During the past year two important additions were made to the sculpture collection by the purchase of two fine Assyrian reliefs dating from 900 B.C.

Among the noteworthy paintings acquired are two Florentine panel pictures of the 14th Century, a "Madonna and Child" by Taddeo Gaddi and "The Three Apostles" by Agnolo Gaddi, and also a rare and interesting study "Adam and Eve in the Garden" by Francesco Furini. Among modern works added to the national collection are unusually fine examples of the work of such well-known men as William Strang, R.A., Augustus John, A.R.A, Charles Ricketts, A.R.A., Mrs. A. L. Swynnerton, A.R.A., Walter Russell, A.R.A., Cayley Robinson, A.R.A., and a number of others. In addition to the above, the Board of Trustees has continued to purchase consistently what it deems the best work of Canadian artists from the current exhibitions.

Outstanding acquisitions in the print department include brilliant impressions of the "Virgin and Child with a Monkey" and the "Melancholia" by Albrecht Dürer, "Ephriam Bonus" by Rembrandt, and the "Nativity" by Schongauer. A total of 893 prints were added to the collection during the year.

5.—Royal Canadian Mounted Police.

The Royal Canadian Mounted Police (formerly the Royal Northwest Mounted Police) are distributed throughout the Dominion, with headquarters at Ottawa. The operations of the force for the year ended September 30, 1922, are described in the Commissioner's Report for that year, which shows that during the year the Royal Canadian Mounted Police discharged numerous and varied functions, in several instances assisting provincial administrations in the maintenance of law and order, co-operating with the Dominion Department of Health in putting down the illicit traffic in narcotics, with the Secretary of State in inquiring into the suitability for citizenship of applicants for naturalization, with the Department of Marine and Fisheries in protecting property in cases of wrecks and in enforcing fisheries regulations, with the Post Office Department in tracking down mail robbers, with the Dominion Bureau of Statistics in the taking of the census in outlying communities, and with the Department of Indian Affairs in the enforcement of the Indian Act, while important patrol work has been done in the Arctic regions. On September 1,

1922, the strength of the force was 64 officers, 1,163 non-commissioned officers and constables, 656 horses and 118 dogs, numbers showing only slight variation from the previous year.

23.—Strength and Distribution of the Royal Canadian Mounted Police on September 30, 1922.

Schedule.	Headquarters Staff.	Maritime Provinces.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.	Yukon.	Northwest Territories.	Baffin Island.	Ellesmere Island.	Canada.
Commissioners	1	–	–	–	–	–	–	–	–	–	–	–	1
Asst. Commissioners	1	–	–	–	–	–	–	1	–	–	–	–	2
Superintendents	2	–	–	3	1	4	2	–	1	–	–	–	13
Inspectors	3	1	1	5	3	10	7	9	3	2	–	1	45
Surgeons	1	–	–	–	–	1	–	–	–	–	–	–	2
Asst. Veterinary Surgeon	–	–	–	–	–	1	–	–	–	–	–	–	1
Staff Sergeants	9	1	1	8	3	9	7	8	4	2	1	–	53
Sergeants	11	3	7	21	7	38	12	17	3	3	–	–	122
Corporals	10	4	7	29	14	48	31	27	8	3	1	1	183
Constables	24	27	24	206	42	152	96	102	28	15	2	5	723
Special Constables	17	1	1	16	1	11	18	11	4	2	–	–	82
Total Personnel	**79**	**37**	**41**	**288**	**71**	**274**	**173**	**175**	**51**	**27**	**4**	**7**	**1227**
Saddle Horses	–	–	–	60	32	251	119	124	4	–	–	–	590
Team Horses	–	–	–	4	2	25	22	6	6	–	–	–	65
Ponies	–	–	–	–	–	–	1	–	–	–	–	–	1
Total Horses	–	–	–	**64**	**34**	**276**	**142**	**130**	**10**	–	–	–	**656**
Dogs	–	–	–	–	24	–	10	–	24	60	–	–	118

6.—The Civil Service of Canada.

Prior to 1882, appointments to the Civil Service of Canada were made directly by the Government of the day. In that year, a Board of Civil Service Examiners was appointed to examine candidates and issue certificates of qualification to those successful at examinations. Appointments, however, were still made by the Government.

The Royal Commission of 1907, appointed to inquire into the Civil Service Act and its operation, reported in favor of the creation of a Civil Service Commission; in 1908 this body was appointed, consisting of two members appointed by the Governor in Council and holding office during good behaviour, but being removable by the Governor-General on address of the Senate and House of Commons. The Civil Service was classified into three divisions under the deputy heads of Departments, each division consisting of two sub-divisions, each of these having its scale of salaries. The Commission was charged with the organization of, and appointments to the inside service and with the competitive examination of candidates for positions in the inside, and the qualifying examination of candidates for the outside service. All British subjects between 18 and 35 years of age, having resided in Canada for two years, were eligible to try these examinations under the system of open competition.

In 1918 a third member of the Civil Service Commission was appointed. The Civil Service Act of that year (8-9 Geo. V, c. 12) extended the Commission's authority to include appointments to the outside service, and enlarged its powers regarding the regulation of the duties of employees and its access to, and relations with, the various Departments of the Government.

The appended table shows the number of employees of the Civil Service as at Dec. 31, 1921, classified as permanent and temporary and as employed in Ottawa and outside of Ottawa.

24.—Employees of the Civil Service of Canada, in Ottawa and outside of Ottawa, as at December 31, 1921.

No.	Departments.	In Ottawa.			Outside of Ottawa.			Grand Total Employees.
		Permanent.	Temporary.	Total Number in Ottawa.	Permanent.	Temporary.	Total Number Outside of Ottawa.	
1	Agriculture[1]	333	40	373	745	235	980	1,353
2	Air Board	27	77	104	33	102	135	239
3	Auditor General	152	53	205	–	–	–	205
4	Archives	38	7	45	20	10	30	75
5	Civil Service Commission	122	101	223	–	–	–	223
6	Customs and Excise[4]	521	35	556	3,075	271	3,346	3,902
7	External Affairs	37	24	61	9	28	37	98
8	Finance[4]	320	100	420	31	30	61	481
9	Gov. Gen. Secy's Office	14	1	15	–	–	–	15
10	House of Commons[4]	129	55	184	–	–	–	184
11	Health	65	15	80	70	147	217	297
12	Immigration and Colonization[4]	133	31	164	406	142	548	712
13	Indian Affairs	72	6	78	193	257	450	528
14	Insurance	31	–	31	–	–	–	31
15	Interior	1,209	124	1,333	674	127	801	2,134
16	International Joint Commission	2	–	2	–	–	–	2
17	Justice	90	–	90	–	–	–	90
18	Labour[4]	95	37	132	63	5	68	200
19	Marine[4]	138	15	153	–	3,585	3,585	3,738
20	Mines	186	74	260	4	10	14	274
21	Militia and Defence[2]	364	703	1,067	85	416	501	1,568
22	Fisheries	52	14	66	219	779	998	1,064
23	Naval Service[4]	167	45	212	190	622	812	1,024
24	Purch. Com. of Canada	2	25	27	–	–	–	27
25	Patents and Copyrights	90	24	114	–	–	–	114
26	Post Office[4]	1,143	232	1,375	7,403	1,784	9,187	10,562
27	Privy Council	20	–	20	–	–	–	20
28	Public Printing and Stationery	246	484	730	–	–	–	730
29	Public Works[3]	761	1,108	1,869	[3]	1,774	1,774	3,643
30	Railway Commission	66	3	69	12	1	13	82
31	Railways and Canals[3]	230	40	270	[3]	1,882	1,882	2,152
32	R.C.M.P.	23	7	30	–	4	4	34
33	Secretary of State	80	57	137	–	–	–	137
34	Soldiers' Civil Re-establishment and Board of Pension Commissioners	341	735	1,076	20	3,708	3,728	4,804
35	Soldiers' Settlement Board[4]	11	156	167	1	629	630	797
36	Trade and Commerce	278	102	380	203	441	644	1,024
	Total[5]	**7,588**	**4,530**	**12,118**	**13,456**	**16,989**	**30,445**	**42,563**

NOTE.—The above enumeration refers solely to the location of employees of the service.
[1] Casual labour excepted. [2] Casual labour and prevailing rate employees excepted. [3] Permanent and temporary employees outside of Ottawa cannot be differentiated. [4] Some part time employees.
[5] Does not include rural postmasters.

7.—Judicial and Penitentiary Statistics.

The collection and publication of Criminal Statistics was first authorized by an Act of 1876 (39 Vict., c. 13), and the results have been published upon a comparable basis in an annual report from 1880 to the present time, being now collected and published by the Dominion Bureau of Statistics under the Statistics Act (8-9 Geo. V., c. 43), which provides for the receipt of an annual return by the Bureau from every court or tribunal administering criminal justice. The statistics as published show for each judicial district (148 in number) the offences that have been committed, analysed to indicate the nature of the offence, the age, sex, occupa-

tion and social condition, birthplace, etc., of the convicted, and the sentences imposed. The Act also provides for the collection of the statistics of penitentiaries, prisons, reformatories and jails, as complementary to the preceding. The statistics relate to years ending September 30, the last report being for 1922. Beginning with the report for this year, an enlargement of the classification of offences has been adopted, by which offences relating to juvenile offenders are compiled separately from those relating to adults. The term "indictable" applies to adults only, similar offences committed by juveniles being termed "major" offences; similarly "non-indictable" offences as applied to adults are termed "minor" offences when applied to juveniles. All comparative tables have been worked out for 1921 and 1922 in accordance with the new classification. A historical table giving the totals for different classes of indictable offences and non-indictable offences, including juvenile delinquents, from 1876 to 1922 is here published (Table 25). In the consideration of this table it should be remembered that while the criminal code undergoes little change over periods of time, the figures of summary convictions depend very much upon the changes in the customs of the people, and are apt to increase with the increasing urbanization of the population. The most significant column of Table 25 is the figure of criminal offences per 100,000 of population.

Indictable Offences.—Table 26 shows, by provinces, in respect of indictable offences, the number of charges and convictions and the percentages of acquittals for the years 1920, 1921 and 1922. There were 21,032 charges and 15,720 convictions for indictable offences throughout Canada during the year ended September 30, 1922, as compared with 21,451 charges and 16,169 convictions in 1921, a decrease of 419 for charges and of 449 for convictions from the previous year.

Summary Convictions.—The number of summary convictions—that is, the total number of convictions for all offences less the number of convictions for indictable offences—in 1922 was 136,322 as compared with 155,376 in 1921. This represents a decrease of 19,054 or 12·3 p.c.

Death Sentences.—During the year ended September 30, 1922, there were 19 persons sentenced to death for murder, as compared with 17 in 1921. The number of commutations of death sentences in 1922 was 7 to imprisonment for life, compared with 9 to imprisonment for life and 1 for 10 years in 1921.

Police Statistics.—The number of police in 135 cities and towns making returns was 3,948. The number of offences reported or known to the police during the year was 201,049; 162,963 persons were arrested or summoned to stand trial, the perpetrators of 38,086 offences remaining undiscovered. Automobiles numbering 3,750 of a value of $4,078,825 were reported stolen, of which 3,450 were recovered. The number of bicycles reported stolen was 5,982 and of those recovered 3,337. In addition the police found 2,531 bicycles which had not been reported stolen. The value of all other articles reported stolen was $1,568,787, and of this amount $1,293,220 was recovered. Photographs of prisoners taken totalled 5,459, finger prints 15,567, and indentifications established, 3,606. Street accidents reported numbered 14,651. Shelter was given to 34,500 persons, and 5,897 children were found and returned to their homes.

25.—Convictions by Groups of Criminal Offences, and Total Convictions for Minor Offences, 1876-1922, with Proportion to Population.

Years.	Indictable or Criminal Offences.							Non-indictable or Minor Offences.			Total Criminal and Minor Offences.
	Offences against			Other felonies and misdemeanours.	Totals of criminal offences.			Total Minor Offences.			
	the person.	property with violence.	property without violence.								
	No.	No.	No.	No.	No.	p.c. of all offences.	per 100,000 pop.	No.	p.c. of all offences.	per 100,000 pop.	No.
1876...	4,959	201	2,870	121	8,151	28·9	206	20,064	71·1	508	28,215
1877...	5,253	229	3,316	114	8,912	29·4	222	21,388	70·6	533	30,300
1878...	5,376	222	3,612	129	9,339	28·3	229	23,666	71·7	580	33,005
1879...	4,815	238	3,043	75	8,168	28·4	197	20,568	71·6	496	28,736
1880...	5,694	176	3,018	202	9,090	32·2	215	19,119	67·8	454	28,209
1881...	4,353	144	2,593	288	7,378	25·2	170	21,847	74·8	504	29,225
1882...	4,667	173	2,845	106	7,791	24·9	178	23,514	75·1	536	31,305
1883...	4,868	132	2,587	128	7,715	22·9	174	25,857	77 1	583	33,572
1884...	4,288	228	3,547	167	8,230	27 6	183	21,563	72·4	481	29,793
1885...	5,057	222	3,157	289	8,725	25 6	192	25,317	74·4	558	34,042
1886...	5,202	255	2,943	224	8,624	25 2	188	25,581	74·8	557	34,205
1887...	4,902	208	2,519	224	7,873	22 7	170	26,772	77·3	577	34,645
1888...	4,790	225	3,442	162	8,619	22·8	184	29,173	77·2	622	37,792
1889...	5,284	283	3,456	164	9,187	23·8	194	29,421	76·2	621	38,608
1890...	5,093	276	3,267	164	8,800	22·7	184	29,906	77·2	624	38,706
1891...	4,788	283	3,369	160	8,600	22·9	178	29,017	77·1	599	37,617
1892...	4,903	251	3,232	173	8,559	24·3	175	26,734	75·7	547	35,293
1893...	4,689	362	3,574	181	8,806	24·7	178	26,847	75·3	544	35,653
1894...	4,599	450	4,155	200	9,404	26·0	189	26,761	74·0	537	36,165
1895...	4,652	462	4,199	295	9,608	25·6	191	27,977	74·4	556	37,585
1896...	4,544	408	4,104	301	9,357	25·1	184	27,921	74·9	549	37,278
1897...	4,418	475	4,431	409	9,733	25·6	189	28,245	74·4	550	37,978
1898...	4,594	540	4,594	335	10,063	26·3	193	28,143	73·7	514	38,206
1899...	4,227	444	4,541	339	9,551	24·7	181	29,159	75·3	554	38,710
1900...	4,598	413	4,571	411	9,993	24·0	188	31,661	76·0	595	41,654
1901...	4,698	451	4,441	384	9·974	23·7	184	32,174	76·3	596	42,148
1902...	4,773	413	4,541	363	10,090	23·1	182	33,446	76·9	605	43,536
1903...	5,480	543	4,944	505	11,472	22·8	202	38,911	77·2	686	50,383
1904...	5,919	552	5,295	528	12,294	22·4	211	42,652	77·6	732	54,946
1905...	5,694	656	5,711	812	12,873	20·6	215	49,686	79·4	829	62,559
1906...	6,215	645	6,425	1,078	14,363	20·3	233	56,540	79·7	916	70,903
1907...	6,651	681	6,907	807	15,046	19·0	239	64,124	81·0	1,017	79,170
1908...	7,379	893	7,973	1,069	17,314	19·5	266	71,320	80·5	1,099	88,634
1909...	6,586	848	7,771	1,332	16,537	18·4	247	73,415	81·6	1,096	89,952
1910...	7,793	943	8,191	1,131	18,058	17·5	268	84,845	82·5	1,227	102,903
1911...	8,352	977	9,024	1,194	19,547	17·3	273	93,713	82·7	1,309	113,260
1912...	9,371	1,195	10,626	1,540	22,732	15·5	309	123,795	84·5	1,686	146,527
1913...	11,444	1,472	12,721	1,724	27,361	15·8	363	145,777	84·2	1,936	173,138
1914...	12,136	1,810	14,645	1,952	30,543	16·7	397	152,492	83·3	1,982	183,035
1915...	10,664	2,234	14,269	1,525	28,692	18·7	373	124,363	81·3	1,619	153,055
1916...	9,327	1,478	11,018	1,459	23,282	18·8	289	100,509	81·2	1,251	123,791
1917...	6,852	1,321	9,886	1,271	19,330	16·9	236	94,681	83·1	1,157	114,011
1918...	7,292	2,049	10,743	1,390	21,474	17·4	258	101,795	82·6	1,222	123,269
1919...	7,731	2,606	11,508	1,656	23,501	18·1	277	106,518	81·9	1,256	130,019
1920...	8,281	2,310	11,634	2,059	24,284	14·9	281	138,424	85·1	1,604	162,708
1921...	8,197	2,609	12,059	2,081	24,946	14·2	284	152,227	85·9	1,731	177,173
1922...	7,119	2,783	11,607	2,610	24,119	15·2	268	134,221	84·8	1,495	158,340

26.—Charges, Convictions and Percentages of Acquittals for Indictable Offences, by Provinces, 1920, 1921 and 1922.

Provinces.	1920.			1921.[1]			1922.[1]		
	Charges	Convictions.	Acquittals.	Charges	Convictions.	Acquittals.	Charges	Convictions.	Acquittals.
	No.	No.	p.c.	No.	No.	p.c.	No.	No.	p.c.
Prince Edward Island	29	19	34·52	21	15	28·6	40	27	32·5
Nova Scotia	952	713	25·10	1,029	712	30·8	973	701	28
New Brunswick	494	434	12·15	356	313	12·1	373	322	13·7
Quebec	4,228	3,288	22·23	3,606	2,654	26·4	3,779	2,885	23·7
Ontario	10,255	8,414	17·95	10,180	7,548	25·9	9,622	7,021	27·1
Manitoba	1,765	1,423	19·43	1,353	1,159	14·3	1,578	1,188	24·7
Saskatchewan	1,807	1,468	18·76	1,558	1,220	21·7	1,733	1,391	19·7
Alberta	1,671	1,240	25·78	1,652	1,263	23·5	1,613	1,171	27·4
British Columbia	2,004	1,438	28·24	1,693	1,282	24·3	1,308	1,004	23·2
Yukon	8	6	25·00	3	3	–	13	10	23·0
Canada	**23,213**	**18,443**	**20·55**	**21,451**	**16,169**	**24·6**	**21,032**	**15,720**	**25·3**

27.—Indictable Offences by Classes during the years ended September 30, 1920, 1921 and 1922.

By Classes and Offences.	1920.		1921.[1]		1922.[1]	
	Number of Charges.	Number of Convictions.	Number of Charges.	Number of Convictions.	Number of Charges.	Number of Convictions.
CLASS I.—OFFENCES AGAINST THE PERSON.						
Murder	57	26	76	17	56	19
Murder, attempt to commit	36	19	40	21	41	20
Manslaughter	84	43	89	39	88	45
Abortion and concealing birth of infants	20	11	27	15	39	25
Rape and other crimes against decency	532	298	621	341	650	350
Procuration	40	27	64	37	50	25
Bigamy	88	71	72	56	92	74
Shooting, stabbing and wounding	282	183	240	137	215	119
Assault on females and wife	97	70	83	50	96	64
Aggravated assault	698	455	703	467	671	464
Assault on police officer	628	578	620	534	427	367
Assault and battery	1,205	934	1,275	1,007	1,270	987
Refusal to support family	149	110	180	101	274	154
Wife desertion	–	–	10	8	14	11
Various other offences against the person	113	76	131	83	141	80
Totals	**4,029**	**2,901**	**4,231**	**2,913**	**4,124**	**2,804**
CLASS II.—OFFENCES AGAINST PROPERTY WITH VIOLENCE.						
Burglary, house, warehouse and shop-breaking	2,317	2,073	2,015	1,628	2,111	1,754
Robbery and demanding with menaces	366	227	416	240	323	212
Highway robbery	26	10	27	20	32	11
Totals	**2,709**	**2,310**	**2,458**	**1,888**	**2,466**	**1,977**
CLASS III.—OFFENCES AGAINST PROPERTY WITHOUT VIOLENCE.						
Bringing stolen goods into Canada	1	1	2	1	2	2
Embezzlement	8	4	6	6	35	19
False pretences	693	473	851	582	987	684
Feloniously receiving stolen goods	652	430	677	432	628	418
Fraud and conspiracy to defraud	576	436	736	505	773	466
Horse, cattle and sheep stealing	73	51	118	80	82	50
Theft	10,478	8,605	8,493	6,559	7,848	5,938
Theft of mail	24	22	37	33	25	21
Totals	**12,505**	**10,022**	**10,920**	**8,198**	**10,380**	**7,598**
CLASS IV.—MALICIOUS OFFENCES AGAINST PROPERTY.						
Arson	78	34	61	21	69	31
Malicious injury to horses, cattle and other wilful damage to property	415	294	238	148	246	187
Totals	**493**	**328**	**299**	**169**	**315**	**218**

[1] Figures for 1921 and 1922 do not include juvenile delinquents.

27.—Indictable Offences by Classes during the years ended September 30, 1920, 1921 and 1922—concluded.

By Classes and Offences.	1920.		1921.[1]		1922.[1]	
	Number of Charges.	Number of Convictions.	Number of Charges.	Number of Convictions.	Number of Charges.	Number of Convictions.
CLASS V.—FORGERY AND OTHER OFFENCES AGAINST THE CURRENCY.						
Offences against currency	14	11	13	9	18	12
Forgery and uttering forged documents	559	419	600	529	532	453
Totals	**573**	**430**	**613**	**538**	**550**	**465**
CLASS VI.—OTHER OFFENCES NOT INCLUDED IN THE FOREGOING CLASSES.						
Attempt to commit suicide	42	33	45	32	52	41
Carrying unlawful weapons	156	144	251	232	151	127
Criminal negligence	67	50	66	42	75	44
Conspiracy	101	58	46	24	62	33
Driving automobile while drunk	48	48	147	142	234	202
Forcible entry	4	3	4	2	–	–
Indecent exposure and other offences against public morals	187	170	103	81	141	121
Intimidation	32	19	60	31	31	21
Keeping bawdy houses and inmates thereof	927	823	1,033	956	682	599
Offences against gambling and lottery acts	361	303	351	283	458	389
Offences against revenue law	122	114	80	63	76	70
Illicit stills	251	239	233	220	686	643
Perjury and subornation of perjury	106	34	116	44	144	62
Prison breach and escape from prison	155	147	164	154	140	128
Riot and affray	101	94	62	48	67	49
Sedition	12	8	2	1	3	3
Sodomy and bestiality	104	85	77	54	84	64
Various other misdemeanours	128	80	90	54	111	62
Totals	**2,904**	**2,452**	**2,930**	**2,463**	**3,197**	**2,658**
Totals for Canada	**23,213**	**18,443**	**21,451**	**16,169**	**21,032**	**15,720**

[1] Figures for 1921 and 1922 do not include juvenile delinquents.

28.—Charges, Acquittals, Convictions and Sentences in respect of Indictable Offences, 1915-1922.

Charges and Sentences.	1915.	1916.	1917.	1918.	1919.	1920.	1921.[1]	1922.
	No.	No.	No.	No.	No.	No.	No.	No.
Charges	26,714	23,942	19,454	21,747	23,021	23,213	21,478	21,032
Acquittals[2]	6,060	4,757	3,868	4,356	4,592	4,746	4,775	4,896
Persons detained for lunacy	29	25	27	21	33	24	30	27
Convictions	20,625	19,160	15,559	17,370	18,396	18,443	16,169	15,720
Males	19,624	15,486	13,086	14,871	16,101	16,722	14,404	14,111
Females	1,001	3,674	2,473	2,499	2,235	1,721	1,765	1,609
First conviction	17,695	16,806	13,093	14,310	15,118	15,096	12,589	13,022
Second conviction	1,776	1,337	1,373	1,551	1,641	1,668	1,845	1,335
Reiterated conviction	1,154	1,017	1,093	1,509	1,637	1,679	1,762	1,363
Sentences—								
Option of a fine	5,344	6,786	4,845	5,106	5,053	5,447	4,900	4,430
Under one year in gaol	5,774	3,816	2,890	3,284	3,455	3,750	3,912	3,982
One year and over in gaol	893	666	462	783	921	886	1,260	1,531
Two years and under five in penitentiary	1,074	799	540	701	978	873	1,122	1,153
Five years and over in penitentiary	241	178	145	185	229	245	481	435
For life in penitentiary	7	5	1	4	7	7	9	11
Death	34	21	15	20	28	26	17	19
Committed to reformatories	517	568	584	678	678	615	126	89
Other sentences	6,741	6,321	6,077	6,609	7,047	6,594	4,342	4,070

[1] Juvenile delinquents not included.
[2] Includes cases where proceedings were stayed, disagreement of jury, etc.

29.—Classification of Persons Convicted of Indictable Offences, 1916-1922.

Classes.	1916.	1917.	1918.	1919.	1920.	1921.	1922.[1]
Occupations—	No.	No.	No.	No.	No.	No.	No.
Agricultural	899	904	1,152	966	898	1,034	1,248
Commercial	1,472	1,424	1,813	1,963	2,406	2,648	2,426
Domestic	914	1,390	1,866	1,608	1,354	999	1,280
Industrial	1,049	937	1,214	1,424	1,483	1,522	1,445
Professional	496	390	359	315	168	194	89
Labourer	4,155	3,513	4,403	5,232	5,347	5,914	6,105
Not given	10,175	7,001	6,563	6,888	6,787	7,085	3,127
Civil condition—							
Married	3,761	3,450	4,474	4,472	4,434	4,811	5,200
Single	8,373	8,700	10,339	11,081	10,760	11,643	7,952
Widowed	142	110	269	315	196	182	218
Not given	6,884	3,299	2,288	2,528	3,053	2,760	2,350
Educational status—							
Unable to read or write	1,007	763	1,084	843	925	904	672
Elementary	11,045	11,390	14,042	14,408	14,179	15,598	12,636
Superior	269	289	192	282	258	245	326
Not given	6,839	3,117	2,052	2,863	3,081	2,649	2,086
Ages—							
Under 16 years	3,157	3,606	4,104	3,876	3,355	–	–
16 years and under 21	1,575	1,928	2,938	3,846	3,288	3,289	3,169
21 years and under 40	5,878	5,511	6,728	6,446	7,216	7,898	8,205
40 years and over	1,758	1,448	1,748	1,795	1,795	1,932	2,182
Not given	6,792	3,066	1,852	2,433	2,789	3,050	2,164
Use of liquors—							
Moderate	7,377	5,387	11,656	10,726	11,000	11,331	8,990
Immoderate	1,891	1,332	1,357	1,276	1,232	1,322	1,197
Not given	9,892	8,840	4,357	6,394	6,211	6,743	5,533
Birthplace—							
England and Wales	952	780	1,177	1,329	1,489	1,659	1,342
Ireland	260	180	285	193	247	268	240
Scotland	321	242	381	381	462	458	359
Canada	7,428	7,097	9,322	10,157	9,570	10,638	8,607
Other British Possessions	57	95	152	90	106	124	63
United States	916	845	947	990	1,148	1,113	992
Other foreign countries	2,697	2,228	3,161	2,780	2,589	2,511	2,188
Not given	6,529	4,092	1,945	2,476	2,832	2,625	1,929
Religion—							
Baptist	287	402	385	383	447	449	344
Roman Catholic	4,918	5,367	6,959	6,896	6,093	6,461	5,077
Church of England	1,525	1,576	1,910	2,186	2,234	2,527	2,223
Methodist	1,107	1,186	1,368	1,589	1,503	1,500	1,358
Presbyterian	965	1,034	1,397	1,432	1,621	1,603	1,409
Other Protestant	1,921	1,286	1,618	1,683	1,671	2,381	1,623
Jews	–	–	–	–	519	564	407
Other denominations	1,228	1,054	1,506	1,438	802	854	815
Not given	7,209	3,654	2,227	2,789	3,553	3,057	2,464
Residence—							
Cities and towns	11,294	11,157	14,190	16,305	16,178	16,120	12,404
Rural districts	1,801	1,501	1,779	2,051	2,111	3,074	2,940
Not given	6,065	2,901	1,401	40	154	202	376

[1] Figures for 1922 do not include juveniles.

30.—Convictions and Sentences for all Offences, by Provinces, 1916-1922.

Provinces.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
	No.	No.	No.	No.	No.	No.	No.
Canada—							
Convictions	123,791	114,011	123,269	130,019	162,708	177,173	158,340
Sentences—							
Penitentiary	982	686	890	1,214	1,125	1,614	1,599
Gaol or fine	97,847	92,402	99,899	105,747	135,288	146,278	126,621
Reformatory	568	584	678	678	615	502	519
Death	21	15	20	28	26	17	19
Other sentences	24,373	20,324	21,782	22,352	25,654	28,762	29,582
Prince Edward Island—							
Convictions	419	356	246	267	359	397	341
Sentences—							
Penitentiary	3	5	2	2	1	3	4
Gaol or fine	402	338	198	240	342	383	327
Reformatory	–	2	7	6	–	1	1
Death	1	–	–	–	–	–	–
Other sentences	13	11	39	19	16	10	9
Nova Scotia—							
Convictions	6,568	5,282	5,511	6,300	6,503	5,572	4,279
Sentences—							
Penitentiary	50	45	105	108	122	137	165
Gaol or fine	5,899	4,533	4,682	5,471	5,818	4,708	3,511
Reformatory	42	49	47	44	38	42	33
Death	2	2	2	–	–	1	2
Other sentences	575	653	675	677	525	684	568
New Brunswick—							
Convictions	2,960	2,896	1,945	2,780	3,839	3,070	2,655
Sentences—							
Penitentiary	40	25	17	53	77	83	106
Gaol or fine	2,696	2,598	1,688	2,477	3,531	2,749	2,371
Reformatory	15	27	16	21	19	20	11
Death	–	–	–	1	–	–	1
Other sentences	209	246	224	228	212	218	166
Quebec—							
Convictions	24,591	25,936	29,121	34,801	44,089	49,106	35,605
Sentences—							
Penitentiary	233	185	192	355	258	274	312
Gaol or fine	19,154	20,205	23,231	28,135	36,835	42,777	28,807
Reformatory	133	155	152	185	241	110	134
Death	1	2	4	7	7	3	4
Other sentences	5,070	5,389	5,542	6,119	6,748	5,942	6,348
Ontario—							
Convictions	49,620	49,579	54,761	53,215	63,463	74,127	72,787
Sentences—							
Penitentiary	287	216	343	389	404	659	559
Gaol or fine	35,618	39,366	42,745	41,211	49,677	57,070	55,599
Reformatory	266	289	352	323	252	245	218
Death	4	4	4	8	11	6	6
Other sentences	13,445	9,704	11,317	11,284	13,119	16,147	16,405
Manitoba—							
Convictions	9,052	8,155	8,662	9,514	12,516	11,610	11,840
Sentences—							
Penitentiary	38	55	59	87	76	144	171
Gaol or fine	7,234	6,626	6,538	7,387	9,949	8,520	8,737
Reformatory	85	31	59	64	39	65	54
Death	2	4	5	–	1	–	1
Other sentences	1,693	1,439	2,001	1,976	2,451	2,881	2,877
Saskatchewan—							
Convictions	11,016	7,072	7,635	7,315	7,991	7,384	8,504
Sentences—							
Penitentiary	62	36	64	63	40	53	54
Gaol or fine	10,141	6,533	7,010	6,636	7,251	6,624	7,501
Reformatory	2	–	5	–	–	–	23
Death	2	–	3	8	4	2	–
Other sentences	809	503	553	608	696	705	926
Alberta—							
Convictions	11,426	6,627	7,633	7,001	8,459	9,847	9,201
Sentences—							
Penitentiary	138	56	65	76	67	67	99
Gaol or fine	10,307	6,124	7,206	6,401	7,756	8,809	7,907
Reformatory	4	1	2	1	4	4	19
Death	4	1	1	3	3	2	2
Other sentences	973	445	359	520	629	965	1,174

30.—Convictions and Sentences for all Offences, by Provinces, 1916-1922—concluded.

Provinces.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
	No.	No.	No.	No.	No.	No.	No.
British Columbia—							
Convictions	7,963	8,002	7,680	8,789	15,434	16,020	13,048
Sentences—							
Penitentiary	129	57	43	81	80	194	129
Gaol or fine	6,277	6,004	6,536	7,768	14,084	14,617	11,822
Reformatory	21	30	38	34	22	15	26
Death	4	1	1	1	–	3	3
Other sentences	1,532	1,910	1,062	905	1,248	1,191	1,086
Yukon Territory—							
Convictions	176	106	75	37	55	40	62
Sentences—							
Penitentiary	2	6	–	–	–	–	–
Gaol or fine	119	75	66	21	45	21	39
Reformatory	–	–	–	–	–	–	–
Death	1	1	–	–	–	–	–
Other sentences	54	24	9	16	10	19	23

31.—Indictable and Summary Convictions by Classes of Offence, 1918-1922. (including Juveniles).

A.—Numbers.

Classes of Offence.	1918.	1919.	1920.	1921.	1922.
	No.	No.	No.	No.	No.
Offences against the person	7,292	7,731	8,281	8,197	7,119
Offences against property with violence	2,049	2,606	2,310	2,609	2,783
Offences against property without violence	10,743	11,508	11,634	12,059	11,607
Other felonies and misdemeanours	1,390	1,656	2,059	2,081	2,610
Totals for criminal offences	21,474	23,501	24,284	24,946	24,119
Breach of Municipal Acts and By-laws	38,401	39,593	59,378	74,459	69,279
Breach of liquor laws	7,472	7,383	10,247	10,460	8,519
Drunkenness	21,026	24,217	39,769	34,362	25,051
Vagrancy	3,867	4,097	5,607	5,561	4,530
Loose, idle and disorderly	2,614	2,496	2,134	5,560	5,241
Keeping bawdy houses and inmates thereof	5,620	5,567	3,821	4,051	3,918
Miscellaneous minor offences	22,795	23,166	17,468	17,774	17,065
Totals for minor offences	101,795	106,519	138,424	152,227	134,221
Grand totals	**123,269**	**130,019**	**162,708**	**177,173**	**158,340**

B.—Ratios per cent of total and per 100,000 of Population.

Classes of Offence.	1918.		1919.		1920.		1921.		1922.	
	Per cent.	Per 100,000 pop.	Per cent.	Per 100,000 pop.	Per cent.	Per 100,000 pop.	Per cent.	Per 100,000 pop.	Per cent.	Per 100,000 pop.
Offences against the person	5·9	88	6·0	91	5·1	96	4·6	93	4·0	68
Offences against property with violence	1·7	25	2·0	31	1·4	27	1·5	30	1·3	22
Offences against property without violence	8·7	129	8·8	136	7·1	135	6·8	137	5·7	96
Other felonies and misdemeanours	1·1	16	1·3	19	1·3	23	1·2	24	2·0	35
Totals for criminal offences	17·4	258	18·1	277	14·9	281	14·1	284	13·0	221
Breach of Municipal Acts and By-laws	31·1	461	30·5	467	36·5	688	42·1	847	45·2	766
Breach of liquor laws	6·1	90	5·7	87	6·3	119	5·9	119	5·6	95
Drunkenness	17·1	252	18·6	286	24·4	461	19·4	391	16·5	279
Vagrancy	3·1	46	3·1	49	3·4	65	3·1	63	3·0	50
Loose, idle and disorderly	2·1	31	1·9	29	1·3	25	3·1	63	3·9	66
Keeping bawdy houses and inmates thereof	4·6	68	4·3	66	2·3	44	2·3	46	2·2	37
Miscellaneous minor offences	18·5	274	17·8	272	10·9	202	10·0	202	10·6	181
Totals for minor offences	82·6	1,222	81·9	1,256	85·1	1,604	85·9	1,731	87·0	1,474
Grand totals	**100**	**1,480**	**100**	**1,533**	**100**	**1,885**	**100**	**2,015**	**100**	**1,695**

Decrease of Drunkenness.—The number of summary convictions for drunkenness in Canada was 25,048 in 1922 as compared with 34,362 in 1921, a decrease of 9,314 or 27·10 p.c. Table 32 shows the number of convictions by provinces for the five years 1918 to 1922, with increases and decreases for 1922 as compared with 1921, from which it will be seen that drunkenness, at least as measured by statistics of summary convictions, decreased during the year 1922 to a most appreciable extent.

32.—Convictions for Drunkenness for the five years 1918-1922.

Provinces.	1918.	1919.	1920.	1921.	1922.	Increase (+) or Decrease (−), 1922 as compared with 1921.	
	No.	No.	No.	No.	No.	Numerical.	Per cent.
Prince Edward Island	96	116	120	144	162	+ 18	+ 12·50
Nova Scotia	2,435	2,879	3,140	2,156	1,492	− 664	− 30·80
New Brunswick	704	1,350	1,882	1,264	1,088	− 176	− 13·92
Quebec	6,680	7,116	11,863	9,944	7,103	− 2,841	− 28·57
Ontario	7,932	8,498	15,021	14,498	10,063	− 4,435	− 30·59
Manitoba	1,123	1,570	2,330	1,429	1,623	+ 194	+ 13·58
Saskatchewan	434	618	919	708	816	+ 108	+ 15·25
Alberta	825	1,057	1,536	1,838	1,608	− 230	− 12·51
British Columbia	778	1,004	2,948	2,379	1,081	− 1,298	− 54·56
Yukon Territory	19	9	10	2	12	+ 10	+500·00
Canada	**21,026**	**24,217**	**39,769**	**34,362**	**25,048**	**− 9,314**	**− 27·10**

NOTE.—Three juveniles not included in 1922.

Juvenile Delinquents.—The number of delinquents under 16 convicted of major offences during the year ended Sept. 30, 1922, was 4,065 against 3,574 in 1921, an increase of 491 or 13·7 p.c. During the same period the number of convictions for minor offences was 2,233 against 2,054, an increase of 179 or 8·7 p.c. Of the grand total (6,298 in 1922) 443 or 7 p.c. were females. Over 60 p.c. of the major offences committed were theft, the remainder being almost entirely composed of wilful offences against property and offences against property with violence. Of the major offenders, 2,758 were released on probation or on suspended sentence, while 1,053 were ordered to make restitution, fined, detained or committed to industrial schools; the remainder were reprimanded or released. Of the total number of major offenders, 543 had one previous delinquency, 573 had two and 112 had three previous delinquencies.

33.—Juvenile Delinquents convicted of Major Offences by Classes of Offence, 1922, with the total and yearly average for the period 1885-1922.

Classes of Offence.	Under 16 years.		16 years and under 21.		Totals.	
	M.	F.	M.	F.	M.	F.
	No.	No.	No.	No.	No.	No.
I. Offences against the person	161	11	226	17	387	28
II. Offences against property with violence	798	8	862	7	1,660	15
III. Offences against property without violence	2,447	113	1,635	154	4,082	267
IV. Malicious offences against property	436	5	66	1	502	6
V. Forgery and offences against the currency	12	1	69	1	81	2
VI. Other offences not included in the above offences	47	26	92	39	139	65
Total	**3,901**	**164**	**2,950**	**219**	**6,851**	**383**
Total 1885-1922	**54,993**	**2,251**	**52,703**	**4,106**	**107,696**	**6,357**
Yearly Average 1885-1922	**1,447**	**59**	**1,387**	**108**	**2,834**	**167**

34.—Population of Penal Institutions, 1918-1922.

Penal Institutions.	In custody, beginning of year.	Admitted during year.	Discharged during year.	In custody at end of year.
1918.				
Penitentiaries	1,505	963	825	1,643
Reformatories for boys	1,189	1,721	1,715	1,195
Reformatories for girls	309	257	225	311
Jails	2,004	29,485	29,437	2,052
Totals	**5,007**	**32,426**	**32,232**	**5,201**
1919.				
Penitentiaries	1,656	1,199	829	2,026[1]
Reformatories for boys	1,270	2,033	1,984	1,319
Reformatories for girls	309	187	198	298
Jails	2,052	32,534	32,450	2,136
Totals	**5,287**	**35,953**	**35,461**	**5,779**
1920.				
Penitentiaries	1,689[2]	1,166	924	1,931
Reformatories for boys	1,562	3,863	3,785	1,640
Reformatories for girls	312	327	359	280
Jails	1,889	32,369	32,135	2,123
Totals	**5,452**	**37,725**	**37,203**	**5,974**
1921.				
Penitentiaries	1,931	1,038	819	2,150
Reformatories for boys	1,636	4,143	3,821	1,958
Reformatories for girls	281	414	388	307
Jails	2,156	38,171	37,579	2,748
Totals	**6,004**	**43,766**	**42,607**	**7,163**
1922.				
Penitentiaries	2,150	1,366	876	2,640
Reformatories for boys	2,023	4,247	4,461	1,809
Reformatories for girls	344	543	482	405
Jails	2,674	35,028	35,043	2,659
Totals	**7,191**	**41,184**	**40,862**	**7,513**

[1] December 31, 1919. [2] April 1, 1920.

NOTE.—Penitentiary statistics till 1919 were supplied directly by each penitentiary, and were for the calendar year. For 1920 and subsequent years they have been supplied by the Inspector of Penitentiaries and are for the fiscal year ended March 31.

Penitentiaries.

The statistics of penitentiaries given in Tables 35 to 38 are compiled from the annual reports to the Minister of Justice of the Inspectors of Penitentiaries. Statistics are given of increase and decrease of numbers, deaths, pardons and paroles, age, sex, nationality, religion, etc.

35.—Movements of Convicts, 1916-1922.

Schedule.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
	No.	No.	No.	No.	No.	No.	No.
In custody at beginning of fiscal year	2,064	2,118	1,694	1,468	1,689	1,931	2,150
Received—							
By forfeiture of parole	11	11	10	4	9	2	3
Paroles revoked	4	31	9	3	2	1	3
Recaptured	1	1	1	3	–	4	–
By transfer	24	10	19	15	150	36	7
From jails, etc.	900	630	625	979[1]	1,005	995	1,353
Totals	**3,004**	**2,801**	**2,358**	**2,472**	**2,855**	**2,969**	**3,516**
Released by—							
Death	11	12	11	45	12	19	15
Escape	1	3	1	3	5[3]	10[4]	1[4]
Expiry of sentence	304	408	268	212	201	308	365
Order of the court	9	4	6	44[2]	13	8	6
Pardon	4	65	66	160	208	4	2
Parole	423	526	455	252	275	374	400
Transfer	24	9	17	16	163	36	7
Deportation	101	76	59	39	35	52	69
Sent to reformatory	1	–	–	–	–	–	2
Returned—insane	8	–	–	–	–	–	–
Returned to Provincial authorities	–	4	7	12	11	8	9
By military order	–	–	–	–	1	–	–
In custody at end of fiscal year	**2,118**	**1,694**	**1,468**	**1,689**	**1,931**	**2,150**	**2,640**

[1] Includes 84 from military courts.
[2] Includes 25 from military order.
[3] From asylums.
[4] One from asylum.

36.—Number of Deaths, Escapes, Pardons and Paroles, 1916-1922.

Schedule.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
	No.	No.	No.	No.	No.	No.	No.
Deaths	11	12	11	45	12	19	15
Escapes	1	3	1	3	5	10	1
Pardons	4	65	66	160	208	4	2
Paroles	423	526	455	252	275	374	400

37.—Age of Convicts, 1915-1922.

Ages.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
	No.	No.	No.	No.	No.	No.	No.	No.
Under 20 years	187	212	141	115	228	335	289	371
From 20 to under 30 years	917	941	714	616	718	775	969	1,242
From 30 to under 40	553	563	473	405	395	434	479	581
From 40 to under 50	240	253	241	205	218	251	242	290
From 50 to under 60	121	119	99	91	97	100	130	123
Over 60 years	46[1]	30	26	31	33	36	41	33
Totals	**2,064**	**2,118**	**1,694**	**1,468**[2]	**1,689**	**1,931**	**2,150**	**2,640**

[1] Includes one age unknown.
[2] Includes five not given (insane).

38.—Classification of Convicts, 1916-1922.

Classes.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
	No.	No.	No.	No.	No.	No.	No.
By Race—							
African	63	56	64	52	57	67	83
Caucasian	1,970	1,553	1,333	1,585	1,820	2,019	2,489
Indian	19	20	21	13	24	31	23
Indian Half-breed	19	21	15	12	8	8	15
Mongolian	47	38	29	24	22	25	30
East Indian	–	6	1	3	–	–	–
Totals	**2,118**	**1,694**	**1,468**[2]	**1,689**	**1,931**	**2,150**	**2,640**
By Nationality—							
British—							
Australian	–	–	–	–	–	–	–
Canadian	1,185	936	796	945	1,107	1,277	1,605
English	169	126	103	103	93	160	182
Irish	43	41	31	38	29	39	36
Scotch	40	24	26	35	36	31	59
Other British	26	22	21	19	20	14	29
Foreign—							
American (U.S.)	204	182	165	163	209	199	246
Austrian and Hungarian	148	104	80	113	108	108	109
Chinese	32	32	26	22	21	21	20
French	11	8	5	4	12	10	9
German	23	17	15	15	18	–	–
Italian	68	61	61	66	81	72	89
Russian	86	74	72	83	93	83	108
Scandinavian[1]	29	18	17	20	15	13	14
Other foreign	54	49	45	63	89	123	134
Totals	**2,118**	**1,694**	**1,468**[2]	**1,689**	**1,931**	**2,150**	**2,640**
By Conjugal State—							
Single	1,258	1,028	892	1,044	1,218	1,456	1,750
Married	677	589	504	567	638	626	790
Widowed	79	77	67	78	75	68	100
Divorced	4	–	–	–	–	–	–
Totals	**2,118**	**1,694**	**1,468**[2]	**1,689**	**1,931**	**2,150**	**2,640**
By Sex—							
Male	2,081	1,659	1,433	1,649	1,917[3]	2,125	2,615
Female	37	35	35	40	14	25[4]	24[4]
Totals	**2,118**	**1,694**	**1,468**	**1,689**	**1,931**	**2,150**	**2,640**
By Social Habits—							
Abstainers	376	299	286	409	548	590	651
Temperate	1,008	837	745	844	975	1,092	1,401
Intemperate	734	558	432	436	408	468	588
Totals	**2,118**	**1,694**	**1,468**[2]	**1,689**	**1,931**	**2,150**	**2,640**
By Religion—							
Anglican	330	266	204	227	301	356	435
Baptist	101	78	91	98	111	113	137
Buddhist	40	33	25	17	7	12	10
Congregationalist	7	not given.	not given.	not given.	not given.	not given.	not given.
Greek Catholic	52	42	34	38	57	73	85
Jewish	26	23	20	28	38	34	41
Lutheran	71	51	47	58	46	37	50
Methodist	205	169	146	168	187	207	241
Presbyterian	222	155	134	153	193	207	285
Roman Catholic	1,025	841	716	824	946	1,052	1,294
Salvation Army	7	not given.	not given.	not given.	not given.	not given.	not given.
Other Creeds	19	28	34	65	45	59	49
No creed	13	8	12	13	–	–	13
Totals	**2,118**	**1,694**	**1,468**[2]	**1,689**	**1,931**	**2,150**	**2,640**

[1] Including Danish, Norwegian, and Swedish.
[2] Includes five not given (insane).
[3] Females in Kingston Penitentiary included, not given separately in report.
[4] In Kingston Penitentiary only.

8.—Divorces in Canada.

For many years subsequent to Confederation the number of divorces granted in Canada was very small, 1883 with 13 divorces being the first year in which the number attained two figures, while 1903 with 21 divorces was the record year up to that time. Thereafter the numbers grew more rapidly, 1909 showing 51 divorces and 1913, the last pre-war year, 59 divorces. This number was, however, less than one per 1,000 of the marriages contracted in Canada in these years.

The effect of the war was to increase very greatly the number of divorces granted in Canada. The causes may be found in the generally unsettling psychological effect of the war period, and the long separations between men on active service and their wives. The provision of new facilities for divorce is also to be considered; owing to a decision of the Imperial Privy Council, divorces in the Prairie Provinces have subsequently to 1918 been granted by the courts of these provinces, so that Ontario and Quebec are now the only provinces in which the applicant for divorce must secure a special Private Act of Parliament.

The above-mentioned causes have tended to produce the recent increase in the number of divorces granted in Canada, which have grown from 90 in 1918 to 544 in 1922, these numbers being those of final decrees, which alone really constitute divorces. The slight decline in 1922 may possibly indicate that the wave of divorces due to the war has passed its highest point. The statistics of divorces granted in the years from 1901 to 1922 inclusive will be found in Table 39. (For divorces in the years prior to 1901 see 1921 Year Book, p. 825.)

39.—Statistics of Divorces Granted in Canada, 1901-1922.

Years.	Granted by the Dominion Parliament.				Granted by the Courts.			Total for Canada.
	Ontario.	Quebec.	Northwest Territories.	Manitoba.	Nova Scotia.	New Brunswick.	British Columbia.	
1901	2	–	–	–	10	–	7	19
1902	2	–	–	–	9	1	3	15
1903	2	1	1	1	8	4	4	21
1904	5	1	–	–	6	2	5	19
1905	2	3	2	2	6	2	18	35
			Albert. Sask.					
1906	10	3	1 –	–	5	1	17	37
1907	3	1	– –	1	8[1]	3	9	25
1908	8	–	– –	–	5	5	12	30
1909	8	4	1 1	2	8[1]	5	22	51
1910	14	2	– 1	3	13[1]	6	12	51
1911	13	4	2 –	3	10[1]	6	19	57
1912	9	3	2 1	1	4	4[2]	11	35
1913	20	4	4 1	6	–	4	20	59
1914	18	7	4 2	2	10	12	15	70
1915	10	3	3 1	1	13	6	16	53
1916	18	1	1 2	2	14	11	18	67
1917	10	4	2 1	–	8	6	23	54
1918	10	2	2 1	–	–	10	65	90
1919	49	4	36[3] 3	88[3]	36	13	147	376
1920	91	9	64[4] 26[4]	42[4]	45	15	136	429
1921	101	9	84[4] 50[4]	122[4]	41	13	128	548
1922	90	6	129[4] 37[4]	97[4]	35	12	138	544

NOTE.—In Prince Edward Island only one divorce was granted from 1868 to 1922; this was in 1913. In consequence of a decision of the Imperial Privy Council, divorces in Manitoba, Saskatchewan and Alberta have subsequently to 1918 been granted by the Courts of these provinces. [1] Includes one judicial separation. [2] Includes one not effective till court costs are paid. [3] One by Parliament. [4] Granted by Courts.

XIV.—SOURCES OF STATISTICAL AND OTHER INFORMATION RELATIVE TO CANADA.

The chief source of information on the current state of the country is the Dominion Bureau of Statistics, organized as the central statistical bureau for Canada, and described in the first part of this section; a list of its publications, which cover almost the whole field of the national statistics, is appended.

The second part of the section contains a list of the Acts of Parliament administered by the several Departments of the Dominion Government, and the the third part a bibliography of the publications of these Departments. This is followed by a bibliography of the publications of Provincial Government Departments, and the section closes with a select bibliography of the most valuable general works relating to the history of Canada.

I.—THE DOMINION BUREAU OF STATISTICS.

The Dominion Bureau of Statistics was set up by statute in 1918 as a central statistical department for Canada: (8-9 Geo. V, c. 43). The Act was a consolidation of all previous statistical legislation and was based on the report of a Commission on Statistics, appointed in 1912, which recommended (a) a series of specific reforms and enlargements in Canadian statistics, and (b) a policy of statistical co-ordination for the Dominion under central direction. In 1915, following the recommendations in this report, the office of Dominion Statistician was created.

The Bureau has been constituted by the transfer or absorption, by Orders in Council, of the following work and branches: (1) the Census and Statistics Office (covering the census, and also agriculture, general manufactures and criminal justice); (2) Fisheries Statistics; (3) Mining Statistics; (4) Forestry Statistics; (5) Dairying and Fruit Statistics; (6) Water and Electric Power Statistics; (7) the Railways and Canals Statistical Branch of the Department of Railways and Canals; (8) the Trade Statistical Branch (exports and imports); (9) Grain Trade Statistics; (10) Live Stock Statistics; (11) Prices Statistics; and (12) Employment Statistics. In addition four new branches were erected, dealing respectively with Public Finance, Internal Trade, Vital Statistics and Education. Subsequently the statistical activities of the Fuel Controller and of the Board of Commerce were absorbed. Modifications of the Bankruptcy, Public Health, and Railway Acts and of the Regulation on franking privileges were also made, with a view to facilitating the collection of statistics.

Working Constitution of the Bureau.—The Act makes the Bureau responsible for the statistics "relative to the commercial, industrial, social, economic and general activities and conditions of the people,"—a universal mandate. Certain statistics, however, originate as by-products in particular Departments, or can best be collected through the field staffs or other machinery of such Departments. These should not only meet the requirements of the Departments in question, but should constitute an integral part of the general system. The Act, accordingly, assigns to the Bureau the further task of "collaborating with all other Departments of the Government in the compilation and publication of statistical records of administration." The machinery for this collaboration is provided by a Regulation dated October 12, 1918, which gives the Dominion Statistician direct access to heads of Departments for conference purposes, with an instruction after such conference to prepare a recommendation for Council, such recommendation, on approval, to

DOMINION BUREAU OF STATISTICS
(1919–1920)
DIVISION I.
ADMINISTRATION
CORRESPONDENCE
FILES & RECORDS
ACCOUNTS
DISTRIBUTION
FLOATING STAFF
EDITORIAL
LIBRARY
MECHANICAL TABULATION
TRANSLATION
DIVISION II.
DEMOGRAPHY
Vital Statistics
Immigration and Emigration
THE CENSUS
DIVISION III.
AGRICULTURE
(Monthly and Annual Reports on Crops, Live Stock etc.)
Fisheries
Furs
Forestry and Allied Industries
DIVISION IV.
INDUSTRIAL CENSUS
(Production, Raw Materials, Capital, Labour etc.)
Mines (38 subdivisions)
Central Electric Stations
Chemical Industries
Dairy Factories
DIVISION V.
FOREIGN TRADE
(Monthly and Annual Reports on Imports and Exports)
General (Various subdivisions)
Construction
DIVISION VI.
TRANSPORTATION & COMMUNICATIONS
Railways
Tramways
Express Companies
Water Transport
Canals
Navigation
Water Carriers
Telegraphs
Telephones
DIVISION VII.
INTERNAL TRADE
General Inter-areal Movements
Special Reports
Prices
Grain
Animals & Animal Products
Coal
DIVISION VIII.
FINANCE
Public
Municipal
Provincial
Private
Wealth Debt Income
Currency & Banking
Insurance
Loan & Trust Companies
Joint Stock Companies
Producers'
Wholesale & Jobbers'
Import & Export Valuations
Farmers' Market prices
Retail
Prices of Services
Stocks & Bonds
DIVISION IX.
ADMINISTRATION OF JUSTICE
Criminal Statistics
Civil Justice
DIVISION X.
EDUCATION
DIVISION XI.
GENERAL STATISTICS
Canada Year Book
"Barometrics"

constitute a permanent arrangement governing the particular subject dealt with. A further Regulation provides for central machine compilation as an adjunct to the system. In this way the Bureau is constituted as a comprehensive central statistical office, working for the most part under the Governor in Council, all purely statistical work having been brought by transfer under its immediate direction. The linking up of Provincial statistics (which, under the B.N.A. Act, include some most important subjects) is secured through a clause permitting Provincial officers to serve as agents under the Statistics Act. A further clause gives the Bureau right of access to Provincial, municipal or corporation records.

Purpose of Statistical Centralization—The purpose of statistical centralization includes, of course, the numerous economies in "overhead" which concentration promotes, as in staff, equipment, elimination of duplication, etc. For example, two pronounced characteristics of statistical work are (a) the large proportion of routine, and (b) its ebb and flow; a "floating" staff is accordingly a feature of a central bureau. The use of electrical tabulating machinery, again, has revolutionized statistical work, but it effects an economy only on large-scale (*i.e.*, centralized) operations. (The Bureau has an investment of over $125,000 in machinery.) Central library, record and administration systems are further examples. Still another economy, from a different angle, flows from the concentration of statistical experience, as a result of the bringing together of the higher statistical officers of the government. The convenience of the public is also promoted by having statistics all in one place.

But the fundamental purpose of statistical centralization lies in the fact that its great subjects, such as production, trade, finance, population, etc., are not separate and distinct, but are closely interrelated. The state, in other words, is not a series of heterogeneous activities, but is itself an entity. The statistics of the country must therefore be framed to illustrate these relationships. For example, if the statistics of mines, fisheries, manufactures, and other phases of production are carried out in a series of water-tight compartments, the phenomena common to all, such as labour, capital, equipment, etc., will inevitably be handled differently, with non-comparable results. Again, if one system of classifying commodities is employed by the Trade Statistician, another by the Production Statistician, and another by the Prices Statistician, no general study of conditions surrounding a particular group of commodities can be made; similarly, the classification of occupations should be uniform, whether in the Census analysis of population, in the vital statistical record of deaths, in criminal and in labour statistics, and so on. Again, on points of method like the construction of index numbers—clearly such devices should yield results that are comparable from field to field. In brief, a true national statistic is not a mere aggregation of the statistics of different activities, but involves also a purview of the totality of phenomena, with the object of revealing their interplay, and, if possible, the controlling forces from time to time. Not only should the State be provided with statistics on the main subjects of national interest, but these statistics should be properly "articulated" with each other, so as to form in so far as possible a single conspectus.

The Bureau has completed the plans for a unified, nation-wide statistical system, covering every important phase of social and economic activity, and has carried them out to a considerable degree.

The main achievement of the Bureau has been in the organization of the several subjects in correlation with each other in accordance with this general plan, and the consequent establishment of a comprehensive viewpoint of the

country as a "going concern." In addition, there has been created what is frequently called a central "thinking office" in statistics, continuously in touch with general conditions and the line of probable developments.

The final concept in the organization of the Bureau of Statistics is that of a national laboratory for social and economic research. Statistics are not merely a record of what has been, but are for use in planning what shall be; it is the duty of a statistical bureau to assist directly in the day-to-day problems of administration, as well as to provide their theoretic background. One of the most significant of recent developments in administration is the extent to which statistical organization has been increased as a guide to national policy. Though its usefulness is only begun, the Dominion Bureau of Statistics has laid the foundations for a service comparable with the increasingly important position taken by Canada in the economic and political world.

Publications of the Bureau.—The first annual report of the Dominion Statistician contained a full description of the organization of the Bureau and of its subject matter. The chart on page 962 is from that report. The main branches of the Bureau are as follows: I. Administration; II. Population—Census and Vital Statistics; III. Agricultural Statistics; IV. Fisheries, Furs and Dairy Products; V. Mining, Metallurgical and Chemical; VI. Forestry and allied Industries; VII. General Manufactures; VIII. External Trade (Imports and Exports); IX. Internal Trade; X. Transportation; XI. Financial Statistics; XII. Statistics of Administration of Justice; XIII. Education Statistics; XIV. General Statistics. The publications of the several Branches are as follows:—

ADMINISTRATION—

Annual Report of the Dominion Statistician.

POPULATION—

Census—

I. Census of Population and Agriculture, 1921—

Bulletins of the Sixth Census of Canada, 1921, as follows:—

(1) Population of the Dominion: (*a*) Population of Canada, 1921, by Provinces, Electoral Districts, Cities, Towns, etc. (*b*) Religions of the People, 1921. (*c*) Origins of the People, 1921. (*d*) Racial Origins of U.S. born, 1921. (*e*) Birthplaces of the People, 1921. (*f*) Canadian-born according to Nationality of Parents, 1921. (*g*) Year of Immigration, Naturalization and Citizenship, 1921. (*h*) Ages of the People, 1921. (*i*) Conjugal Condition of the People, 1921. (*j*) Language Spoken, 1921. (*k*) Literacy, 1921. (*l*) Occupations, 1921. Also Bulletins on Population by Provinces as follows: (*a*) Population of Nova Scotia—Electoral Districts, etc. (*b*) Population of Prince Edward Island—Electoral Districts, etc. (*c*) Population of New Brunswick—Electoral Districts, etc. (*d*) Population of Quebec—Electoral Districts, etc. (*e*) Population of Ontario—Electoral Districts, etc. (*f*) Population of Manitoba—Electoral Districts, etc. (*g*) Population of Saskatchewan—Electoral Districts, etc. (*h*) Population of Alberta—Electoral Districts, etc. (*i*) Population of British Columbia—Electoral Districts, etc.

(2) Census of Agriculture, 1921: (*a*) Field Crops of Prairie Provinces, 1921. (*b*) Agriculture of Canada—General Summary. (*c*) Pure-bred Domestic Animals, 1921. (*d*) Agriculture of Nova Scotia, 1921. (*e*) Agriculture of Prince Edward Island, 1921. (*f*) Agriculture of New Brunswick, 1921. (*g*) Agriculture of Quebec, 1921. (*h*) Agriculture of Ontario, 1921. (*i*) Agriculture of Manitoba, 1921. (*j*) Agriculture of Saskatchewan, 1921. (*k*) Agriculture of Alberta, 1921. (*l*) Agriculture of British Columbia, 1921.

N.B.—The Reports of the 1921 census will include four volumes on population and one on agriculture; there will also be issued a series of special reports on the Foreign-born, Origins of the People, Religions, Families, Housing, Literacy and School Attendance, Earnings of the People, Unemployment, etc.

II. Census of Population, etc., 1911—

Reports of the Fifth Census of Canada, 1911. Vol. I. Areas and Population by Provinces, Districts and Subdistricts, with Introduction, Tables I to XV, pp. i-viii, 1-623. Vol. II. Religions, Origins, Birthplaces, Citizenship, Literacy and Infirmities by Provinces, Districts and Subdistricts, with Introduction. Tables I-XLVI, pp. i-iv, 1-634. Vol. III. Manufactures for 1910 as enumerated in June, 1911, with Introduction. Tables I-XX, pp. i-xvi, 1-432. Vol. IV. Agriculture, with Introduction. Tables 1-90, I-XXXV, pp. i-xcv, 1-428. Diagrams 5 pp. Vol. V. Forest, Fishery, Fur and Mineral production, with Introduction. Tables 1-51, I-XXVI, pp. i-l, 1-171. Vol. VI. Occupations of the People, with Introduction. Tables 1-25, I-VI, pp. i-xxxi, 1-469.

Bulletins of the Fifth Census of Canada, 1911. Manufactures of Canada—Dairy Industries—Agriculture, Prince Edward Island—Agriculture, Nova Scotia—Agriculture, New Brunswick—Agriculture, Quebec—Agriculture, Ontario—Agriculture, Manitoba—Agriculture, Saskatchewan—Agriculture, Alberta—Agriculture, British Columbia—Religions—Origins of the People—Birthplaces of the People—Educational Status—Mineral Production—Infirmities—Ages—School Attendance.

Special Report of the Foreign-born Population. (Abstracted from the Records of the Fifth Census of Canada, June, 1911, 23 tables, 62 pp., 1915.)

III. Census of Population and Agriculture of the Prairie Provinces, 1916—

Report of the Census of Population and Agriculture of the Prairie Provinces, 1916. Tables 1-54, I-XXVI, pp. i-lxvi, 1-356.

Births, Deaths and Marriages—

IV. Vital Statistics.—(1) Annual Report on Vital Statistics of Canada, by provinces and municipalities. (2) Monthly Report of Births, Marriages and Deaths, by provinces. (3) Report of Conference on Vital Statistics, held June 19-20, 1918, pp. 1-48.

PRODUCTION—

I. General Summary of Production—

Including and differentiating (gross and net)—(1) Primary Production (Agriculture, Fishing, Furs, Forestry and Mining) and (2) Secondary Production or General Manufactures.

II. Agriculture—

(1) Monthly Bulletin of Agricultural Statistics. (Contains monthly reports on agricultural conditions, prices, weather, etc.—preliminary, provisional and final estimates of areas, yields, quality and values of field crops—numbers and values of farm live stock, poultry, etc.—fruit statistics—stocks of grain—annual summary of agricultural production—international agricultural statistics.) (2) Advance Summaries of Agricultural Statistics (monthly).

(See also Census of Agriculture above.)

III. Furs—

(1) Annual Report on Fur Farms. (2) Annual Report on the Production of Raw Furs (wild-life).

IV. Fisheries—

(1) Annual Report on Fisheries Statistics. (2) Advance Summaries of Fish caught, marketed and prepared, by provinces, districts, etc.

V. Forestry—

(1) Annual Summary of the value, etc., of forest production. (Covers operations in the woods for saw-mills, shingle mills, pulp and paper mills, etc., production of mining timber; production of poles and cross ties, and farm production (decennial) of firewood, posts, etc.)

(See also Reports on Manufactures of Forestry Products listed under "Manufactures" Section VII. subsection (5).).

VI. Mineral Production: (Mining and Metallurgy)—

(1) General Reports: (*a*) Annual Report on the Mineral Production of Canada; (*b*) Preliminary Reports (semi-annual) on the Mineral Production of Canada.

(2) Coal: (*a*) Annual Report on Coal Statistics for Canada; (*b*) Monthly Report on Coal Statistics for Canada.

(3) Annual Bulletins on the following subjects: Metals—(*a*) Arsenic; (*b*) Cobalt; (*c*) Copper; (*d*) Gold; (*e*) Iron Ore; (*f*) Lead; (*g*) Nickel; (*h*) Metals of the Platinum Group; (*i*) Silver; (*j*) Zinc; (*k*) Miscellaneous Non-Ferrous Metals, including Aluminium, Antimony, Chromite, Manganese, Mercury, Molybdenum, Tin, Tungsten. Non-Metals—(*a*) Asbestos; (*b*) Coal; (*c*) Feldspar; (*d*) Gypsum; (*e*) Iron Oxides; (*f*) Mica; (*g*) Natural Gas; (*h*) Petroleum; (*i*) Quartz; (*j*) Salt; (*k*) Talc; (*l*) Miscellaneous Non-Metallic Minerals including Actinolite, Barytes, Corundum, Fluorspar, Graphite, Grindstones, Magnesite, Magnesium Sulphate, Mineral Waters, Natroalunite, Peat, Phosphate, Pyrites, Sodium carbonate, Sodium sulphate, Tripolite. Structural Materials and Clay Products—(*a*) Cement; (*b*) Clay and Clay Products; (*c*) Lime; (*d*) Sand and Gravel; (*e*) Stone and Slate.

(4) Industrial Reviews of the following: (*a*) The Gold Industry; (*b*) Copper-Gold-Silver Industry; (*c*) Nickel-Copper Industry; (*d*) Silver-Cobalt Industry; (*e*) Silver-Lead-Zinc Industry.

(5) Provincial Mineral Production Reports for: (*a*) Nova Scotia; (*b*) New Brunswick; (*c*) Quebec; (*d*) Ontario; (*e*) Manitoba; (*f*) Saskatchewan; (*g*) Alberta; (*h*) British Columbia; (*i*) Yukon.

(See also sections (6), (7), (8) and (9) under "Manufactures" below).

VII. Manufactures—

(1) General Summary, by Provinces and leading Cities—(industrial groups classified by component materials, purpose, etc., of products—comparative statistics).

(2) Manufacture of Vegetable Products—Special Bulletins as follows: (*a*) Coffee and Spices; (*b*) Cocoa and Chocolate; (*c*) Fruit and Vegetable Preparation, including canning, evaporating and preserving; (*d*) Pickles, Sauces, Vinegar and Cider; (*e*) Flour and Cereal Mills. (See also under heading "Internal Trade"); (*f*) Bread and other Bakery Products; (*g*) Biscuits and Confectionery; (*h*) Macaroni and Vermicelli; (*i*) Liquors, Distilled; (*j*) Liquors, Malt; (*k*) Liquors, Vinous; (*l*) Rubber Goods and Rubber Boots and Shoes; (*m*) Starch and Glucose; (*n*) Sugar Refineries; (*o*) Tobacco Products; (*p*) Linseed Oil and Oil Cake.

(3) Animal Products and their Manufactures—Special Reports and Bulletins as follows: (*a*) Dairy Products; (*b*) Slaughtering and Meat packing; (*c*) Fish and Fish Products; (*d*) Leather Tanneries; (*e*) Harness and Saddlery; (*f*) Leather Boots and Shoes; (*g*) Leather Goods; (*h*) Leather Gloves and Mitts. (See also under heading "Internal Trade").

(4) Textile and Allied Industries—General report. Special Bulletins as follows: (*a*) Cotton Textiles (Cloth, yarn, thread and waste); (*b*) Woollen Textiles (Cloth, yarn, blankets, felt and waste); (*c*) Silk Mills; (*d*) Clothing (Men's and women's factory and custom); (*e*) Hats Caps and Furs; (*f*) Hosiery and Knit Goods; (*g*) Neckwear (Men's and Women's) and Fancy Goods; (*h*) Oiled Clothing and Waterproofs; (*i*) Corsets; (*j*) Carpets, Rugs and Mats; (*k*) Cordage, Rope and Twine.

(5) Manufactures of Forest Products—Special Reports as follows: (1) Lumber, Lath and Shingle Industry; (2) Pulp and Paper; (3) Manufactures of Wood and Paper Products: (*a*) Cooperage; (*b*) Planing Mills, Sash and Door Factories; (*c*) Printing, Bookbinding, Publishing, Lithographing and Engraving, Stereotyping and Electrotyping, Maps and Blue Prints; (*d*) Furniture; (*e*) Carriages, Wagons and Sleighs, and Materials thereof; (*f*) Canoes, Rowboats and Launches; (*g*) Coffins and Caskets; (*h*) Containers—Boxes and bags (paper); boxes and packing cases (wood); baskets and crates; woodenware.

(6) Iron and Steel and Their Products—General Report. Special Bulletins as follows: (*a*) Pig Iron, Steel and Rolled Products; (*b*) Castings and Forgings; (*c*) Machinery, Implements; (*d*) Motor Vehicles and Accessories;

(*e*) Railway Rolling Stock; (*f*) Heating and Ventilating Equipment; (*g*) Wire and Wire Goods; (*h*) Sheet Metal Products; (*i*) Hardware and Tools; (*j*) Miscellaneous Iron and Steel Products.

(N.B.—A Monthly Report on the Production of Iron and Steel is issued.)

(7) Manufactures of Non-Ferrous Metals—General Report. Special Bulletins as follows: (*a*) Aluminium Products; (*b*) Brass and Copper Products; (*c*) Lead, Tin and Zinc Products; (*d*) Manufactures of Precious Metals; (*e*) Electrical Apparatus.

(8) Manufactures of Non-Metallic Minerals—General Report. Special Bulletins as follows: (*a*) Aerated Waters; (*b*) Asbestos and Allied Products; (*c*) Cement Products and Sand Lime Brick; (*d*) Coke and By-Products; (*e*) Glass (blown, cut, ornamental, etc.); (*f*) Illuminating and Fuel Gas; (*g*) Monumental and Ornamental Stone; (*h*) Petroleum Products; (*i*) Miscellaneous Manufactured Non-Metallic Mineral Products, including: (*a*) Artificial Abrasives; (*b*) Abrasive Products; (*c*) Electrodes; (*d*) Fuel Briquettes; (*e*) Gypsum Products; (*f*) Mica Trimming.

(9) Chemical and Allied Products—General Report. Special Bulletins as follows: (*a*) Coal Tar and its Products; (*b*) Explosives, Ammunition, Fireworks and Matches; (*c*) Fertilizers; (*d*) Medicinal and Pharmaceutical Preparations; (*e*) Pigments, Paints and Varnishes; (*f*) Soap, Perfume, Cosmetics and Toilet Preparations; (*g*) Inks, Dyes and Colour Compounds; (*h*) Wood Distillation and Extracts.

(10) Miscellaneous Manufactures—Special Bulletins as follows: (*a*) Brooms and Brushes; (*b*) Musical Instruments (including pianos and organs, and phonographs); (*c*) Musical Instrument Materials and Parts; (*d*) Buttons; (*e*) Trunks and Valises.

(11) Summary Reports on Groups of Industries, classified according to the use or purpose of their principal product as follows: (*a*) Food; (*b*) Clothing; (*c*) Drink and Tobacco; (*d*) Personal and Household Goods; (*e*) Books; (*f*) Equipment; (*g*) Materials for further manufacture.

(N.B.—For Statistics of Water-Power and Central Electric Stations, see under heading "Public Utilities").

VIII. Construction.—(*a*) The Building and General Construction Industry; (*b*) Railway, Telephone and Telegraph—Construction, Maintenance of Way and Repairs; (*c*) Government and Municipal Construction; (*d*) The Bridgebuilding Industry; (*e*) The Shipbuilding Industry; (*f*) Building Permits—Monthly Record.

EXTERNAL TRADE (IMPORTS AND EXPORTS)—

(1) Annual Report of the Trade of Canada; (2) Preliminary Annual Report of the Trade of Canada; (3) Monthly Report of the Trade of Canada; (4) Monthly Bulletins on Trade Statistics as follows: General—(*a*) Abstract of Imports, Exports and Duty Collected by Latest Month, Accrued Period, and Latest 12 Months; (*b*) Summary of Trade by Countries and Principal Commodities, Latest 12 Months; (*c*) Summary of Trade with United Kingdom, Principal Commodities, Latest Month and 12 Months; (*d*) Summary of Trade with United States, Principal Commodities, Latest Month and 12 Months; (*e*) Abstract of Trade by Countries; (*f*) Summary of Trade by Groups, Latest Month, Accrued Period and Latest 12 Months. Special—(*a*) Summary Exports, Grain and Flour; (*b*) Detailed Exports, Grain and Flour; (*c*) Exports of Milk, Milk Products and Eggs; (*d*) Exports of Pulp Wood, Wood Pulp and Paper; (*e*) Exports of Rubber Goods and Insulated Wire; (*f*) Exports of Refined Sugar; (*g*) Exports of Gold and Silver (ores and silver bullion); (*h*) Exports of Preserved and Canned Fish; (*i*) Exports of Calcium Carbide; (*j*) Exports of Leather Footwear; (*k*) Exports of Vehicles of Iron (Automobiles, Bicycles, Railway Cars, etc.); (*l*) Imports of Rubber and Rubber Goods; (*m*) Imports of Preserved and Canned Fish; (*n*) Imports of Wood Pulp and Paper; (*o*) Imports of Narcotic Drugs; (*p*) Imports of Vehicles of Iron; (*q*) Imports of Grain and Grain Products; (*r*) The Tea Trade, Imports and Exports; (*s*) Imports of Footwear (except Rubber Goods); (*t*) Exports of Live Animals; (*u*) Exports of Meats; (*v*) Imports of Meats.

INTERNAL TRADE—

Grain—

(1) Annual Report on the Grain Trade of Canada; (2) Weekly Report on the Grain Movement; (3) Monthly Report on Mill Grind; (4) Special historical report on Flour Milling Industry, 1921.

Live Stock, etc.—

(1) Annual Report on Live Stock and Animal Products; (2) Monthly Report on Stocks in Cold Storage.

Prices Statistics—

(1) Annual and Monthly Reports on Wholesale and Retail Prices and Price Indexes; (2) Prices of Securities.

Other—

Monthly Report of Visible Supply of Raw and Refined Sugar.

TRANSPORTATION, COMMUNICATIONS AND PUBLIC UTILITIES—

Railways and Tramways—

(1) Annual Report on Railway Statistics; (2) Annual Report on Electric Railway Statistics; (3) Monthly Bulletin on Railway Revenues, Expenses, Incomes and Operating Statistics; (4) Monthly Statement of Traffic of Railways; (5) Weekly Report of Carloads of Revenue Freight.

Express—

Annual Report on Express Statistics.

Telegraphs—

Annual Report on Telegraph Statistics.

Telephones—

Annual Report on Telephone Statistics.

Water Transportation—

(1) Annual Report on Canal Statistics; (2) Monthly Report on Canal Statistics; (3) Report of Census of Canadian Registered Ships.

Electric Stations—

Annual Report on Central Electric Stations in Canada.

FINANCE—

(1) Annual Report on Provincial Finance; (2) Annual Municipal Statistics of Cities of 10,000 population and over; (3) Annual Municipal Statistics of Urban Municipalities of 3,000 to 10,000 population; (4) Annual Municipal Statistics of Urban Municipalities of 1,000 to 3,000 population; (5) Special Bulletins on Assessed Valuations by Provinces, Municipal Bonded Indebtedness, etc.

JUSTICE—

Annual Report on Criminal Statistics.

EDUCATION—

(1) Annual Report on Education Statistics; (2) Annual Statistics of Business Colleges; (3) Annual Statistics of Private, Elementary and Secondary Schools; (4) Statistics of Universities and Colleges; (5) Report on Playgrounds, etc., in Canada; (6) Historical Statistical Survey of Education in Canada; (7) Library Statistics of Canada, 1920-21; (8) Report of Conference on Education Statistics, held October 27-28, 1920.

GENERAL STATISTICS—

Employment.—Monthly and Annual Reports and Index Numbers by Localities and Industries.

Commercial Failures.—Monthly and Annual Reports.

The Canada Year Book, 1921, with frontispiece "The Arms of Canada," map of Canada and Newfoundland, a Statistical Summary of the Progress of Canada since 1871, and maps and diagrams, pp. i-xxiii, 1-909.

Contents: I. The Constitution and Government of Canada, by S. A. Cudmore, B.A. (Tor.), M.A. (Oxon.), F.S.S., F. R. Econ. Soc., Editor Canada Year Book. II. Provincial and Local Government in Canada; Maritime Provinces, Quebec, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia, by various writers. III. Chronological History of Canada.

IV. Physical Characteristics of Canada, including special articles on Geology and Economic Minerals, Geology in Relation to Agriculture in Canada, the Flora of Canada, the Faunas of Canada, and Economic Geology of Canada, 1920-21. V. Area and Population. VI. Education. VII. Climate amd Meteorology, including article on the Climate of Canada since Confederation. VIII. Production, including article on the Development of Agriculture in Canada. IX. Trade and Commerce. X. Transportation and Communications. XI. Labour, Wages and Prices. XII. Finance. XIII. Administration. XIV. Legislation and Principal Events of the Year, 1921. XV. Extracts from the Canada Gazette.

The Canada Year Book, 1922-23: The official statistical annual of the Physiography, Resources, History, Institutions and Social and Economic Conditions of the Dominion, with Map of Canada and Newfoundland, a Statistical Summary of the Progress of Canada, maps, diagrams, etc., pp. i–xxvii, 1–1038.

Contents: I. Physical Characteristics of Canada (Geographical Features, Geology, Seismology, Flora, Faunas, Natural Resources, Climate and Meteorology). II. History and Chronology. III. The Constitution and General Government of Canada. IV. Provincial and Local Government in Canada. V. Parliamentary Representation in Canada. VI. Population (Census, Vital Statistics, Immigration). VII. Production (General Survey of Production, Agriculture, Forestry, Fur Trade, Fisheries, Mining, Water Powers, Manufactures, Construction). VIII. Trade and Commerce (External and Internal Trade). IX. Transportation and Communications (Steam Railways, Electric Railways, Motor Vehicles, Air Navigation, Canals, Shipping, Navigation, Telegraphs, Telephones, Express, Post Office). X. Labour, Wages and Prices. XI. Finance, Public and Private (Currency, Banking, Insurance, etc.). XII. Education. XIII. Miscellaneous Administration (Public Health, Hospitals and Charities, Justice, Public Lands, Public Defence, Public Works, Indian Administration, etc.) XIV. Sources of Statistical and other Information Relative to Canada. XV. Annual Register for 1922-23—(Dominion and Provincial Legislation, Principal Events, Obituary, Government Appointments, etc.)

II.—ACTS ADMINISTERED BY DOMINION DEPARTMENTS.

List of the Principal Acts of Parliament administered by Departments of the Government of the Dominion of Canada, as compiled from information supplied by the respective Departments.

(Numbers within parentheses denote chapters of the Revised Statutes of Canada, 1906—R.S.C., 1906.)

Justice.—Department of Justice (21); Solicitor General's (22); Northwest Territories (62); Yukon (63); Dominion Police (92); Judges (138); Supreme Court (139); Exchequer Court (140); Admiralty (141); Petition of Right (142); Criminal Code (146); Penitentiary (147); Prisons and Reformatories (148); Identification of Criminals (149); Ticket of leave (150); Fugitive Offenders' (154); Extradition (155); Juvenile Delinquents (7-8 Edw. VII, c. 40, 1908); Bankruptcy (c. 36, 1919).

External Affairs.—The functions and duties of this Department are defined by the Department of External Affairs Act, 1912 (2 Geo. V, c. 22) and by the International Boundary Waters Treaty Act (1-2 Geo. V, 1911, c. 28), as amended by the statute of April 3, 1914 (4 Geo. V, c. 5).

Customs and Excise.—Customs Tariff; Customs; Canada Shipping (in part); Infectious and Contagious Diseases affecting Animals (in part); Destructive Insect and Pest (in part); Export; Copyright (in part); Petroleum and Naphtha; Inland Revenue; Special War Revenue, 1915.

Post Office.—Post Office; Pacific Cable; Parcel Post; Special War Revenue (in part).

Agriculture.—Experimental Farm Stations; Fruit Act; Dairy Industry; Cold Storage; Cold Storage Warehouse; Oleomargarine; Milk Test; Seed Control; Feeding Stuffs; Live Stock Pedigree; Live Stock and Live Stock Products; Animal Contagious Diseases; Meat and Canned Foods; Destructive Insect and Pest; Agricultural Instruction; Dairy Produce Act; Fertilizers Act; Section 235 Criminal Code (Race Track Betting).

Interior.—Department of the Interior; Dominion Lands; Dominion Lands Surveys; Forest Reserves and Parks; Irrigation; Railway Belt; Railway Belt, Water; Yukon; Yukon Placer Mining; Dominion Water Power; Land Titles; Northwest Game; Northwest Territories; Ordnance and Admiralty Lands; Reclamation; Seed Grain; Migratory Birds Convention Act.

Health.—Quarantine Act (74); Public Works Health Act (135); Leprosy Act (136); Canada Shipping Act (Sick and Distressed Mariners) (113); Proprietary or Patent Medicines Act (7-8 Edw. VII, c. 56); Opium and Narcotic Drug Act; an Act respecting Food and Drugs; an Act respecting Honey; an Act respecting Maple Products.

Finance.—Department of Finance and Treasury Board; Appropriation; Superannuation and Retirement; Contingencies; Consolidated Revenue and Audit; Currency; Ottawa Mint; Dominion Notes; Provincial Subsidies; Bank; Savings Bank; Penny Bank; Quebec Savings Banks; Bills of Exchange; Interest; The Special War Revenue Act, 1915, and amendments, 1920 (in part); The Business Profits War Tax Act, 1916, and amendments; Income War Tax Act, 1917, and amendments; Finance Act; Ottawa Improvement Commission Act.

National Defence.—*Militia and Defence.*—Militia Act; Royal Military College Act; Militia Pension Act; Sections 85 and 86 of the Criminal Code; the Air Board Act; Army Act; Regimental Debts Act; the National Defence Act, 1922. *Naval Service.*—Naval Service Act (9-10 Edward VII, chapter 43); Naval Discipline; Dominion Naval Forces Act (8-9 George V, chapter 34); the National Defence Act, 1922.

Public Works of Canada.—Public Works (39) and amendments (8-9 Geo. V, 1918, c. 37); Government Harbours and Piers, s. 5 (112); Navigable Waters Protection, s. 7 (115) and amendments (8-9 Geo. V, 1918, c. 33); Telegraph Secrecy (126); Dry Dock Subsidies (9-10 Edw. VII, 1910, c. 17); an Act to amend the Navigable Waters Protection Act (9-10 Edw. VII, 1910, c. 44); an Act to authorize the payment of a subsidy to the Collingwood Shipbuilding Co., Ltd. (2 Geo. V, 1912, c. 17); an Act to amend the Dry Dock Subsidies Act, 1910 (2 Geo. V, 1912, c. 20); an Act to amend the Government Works Toll Act, R.S.C., 1906, c. 40 (2 Geo. V, 1912, c. 26); an Act to incorporate the National Gallery of Canada (3-4 Geo. V, 1913, c. 33); an Act to authorize the payment of a subsidy to the Western Dry Dock and Shipbuilding Co., Ltd. (3-4 Geo. V, 1913, c. 57); Acts to amend the Dry Dock Subsidies Act, 1910 (4-5 Geo. V, 1914, c. 29, 7-8 Geo. V, 1917, c. 27 and 9-10 Geo. V, 1919, c. 51); Act to confirm an agreement between His Majesty the King and the Corporation of the City of Ottawa (10-11 Geo. V, c. 15); Ferries Act, R.S.C., 1906, c. 108, transferred by Order in Council, 3rd June, 1918, for administration by Public Works Department.

Trade and Commerce.—Grain Act Consolidation; Electricity and Fluid Exportation; Electricity Inspection; Electrical Units; Gold and Silver Marking; Gas Inspection; Inspection and Sale; Inspection of Water Meters; Petroleum Bounty; Statistics; Timber Marking; Weights and Measures Inspection; Copyright Act; Cullers Act; Patent Act; Trade Mark and Design Act.

Labour.—Conciliation and Labour (96); Industrial Disputes Investigation (6-7 Edw. VII, 1907, c. 20); Fair Wages Resolution of the House of Commons; Employment Offices Co-ordination Act (8-9 Geo. V, c. 21); The Technical Education Act (9-10 Geo. V, c. 73); The Government Annuities Act, 1908.

Secretary of State.—Companies; Naturalization; Canada Temperance; Boards of Trade; Trade Unions; War Charities, 1917.

Railways and Canals.—Department of Railways and Canals (35); Government Railways (36); Intercolonial and P.E.I. Railway Employees' Provident Fund (6-7 Edw. VII, c. 22); The Government Railways Small Claims (9-10 Edw. VII, c. 26); and amendments to foregoing Acts; Acts to amend the National Transcontinental Railway Act (4-5 Geo. V, c. 43 and 5 Geo. V, c. 18) and to amend the Government Railway Act and authorize the purchase of certain Railways (5 Geo. V, c. 16); an Act to incorporate Canadian National Railway Company and respecting Canadian National Railways (9-10 Geo. V, c. 13) and amending Act (10-11 Geo. V, c. 39); an Act to provide compensation where employees of His Majesty are killed or suffer injuries while performing their duties (8-9 Geo. V, c. 15 and

amending Act (9-10 Geo. V, c. 14); the Canada Highways Act (9-10 Geo. V, c. 54); the acquisition of the preference and common stock of the Grand Trunk Railway Company of Canada (10 Geo. V, c. 17, 10-11 Geo. V, c. 13 and 11-12 Geo. V, c. 9).

The Railway Act, 1919 (Companies) (9-10 Geo. V, c. 68) confers certain powers upon the Minister of the Department. In the case of subsidized railways the authorizing Acts are carried out under the Department which has also certain jurisdiction where government guarantee has been given.

Marine.—Department of Marine and Fisheries; Government Vessels Discipline; Government Harbours and Piers; Canada Shipping and amending Acts (6-7 Geo. V, cc. 12 and 13); Navigable Waters Protection; Quebec Harbour and River Police; Live Stock Shipping; an Act to amend the Vancouver Harbour Commissioners' Act (6-7 Geo. V, c. 9); an Act transferring Rights and Powers in Harbour of St. John, N.B., to a Board of three Commissioners approved by Order in Council; The Vancouver Harbour Advances Act, 1919; an Act fixing the rate of interest to be paid on loans by His Majesty to the Harbour Commissioners of Montreal and Quebec; an Act to amend the Canada Shipping Act (Transfers and Mortgages of Ships), passed during the session of 1919-20; Canada Shipping Acts (10-11 Geo. V, cc. 5, 6, 23, 38 and 70) relating respectively to certificates of service, steamboat inspection, pilotage, sick and diseased mariners and shipbuilding; an Act to extend the time for the payment of certain debentures issued by the Harbour Commissioners of Montreal (11-12 Geo. V, c. 11); an Act to amend the Canada Shipping Act (11-12 Geo. V, c. 19); an Act respecting the Lake of the Woods and other waters (11-12 Geo. V, c. 38).

Indian Affairs.—The Indian Act, 1906, with amendments to date.

King's Printer and Controller of Stationery.—Public Printing and Stationery (80) (10 Geo. V, c. 27, 1919).

Mines.—Geology and Mines (6-7 Edw. VII, 1907, c. 29); Explosives (4-5 Geo. V, 1914, c. 31).

III.—PUBLICATIONS OF DOMINION DEPARTMENTS.

List of Principal Publications of the Departments of the Government of the Dominion of Canada, as compiled from information supplied by the respective Departments.

Customs and Excise.—Annual Report containing Tables of Imports, Exports, Customs and Inland Revenue. Annual Report of Shipping.

Post Office,—Annual Report of the Postmaster General. Official Postal Guide. Regulations as to parcel post and rural mail delivery.

Agriculture.—The Agricultural Gazette of Canada, subscription, $1 per year (bi-monthly). Annual Reports of the Minister, of the Experimental Farms and Stations, of the Veterinary Director General and of the Entomological Branch. Bulletins, pamphlets, and circulars of the Experimental Farms Branch on a great variety of agricultural subjects, including publications of the following nine divisions: Field Husbandry; Animal Husbandry; Horticulture; Cereal; Chemistry; Forage Plants; Botany; Poultry and Tobacco. Seasonable Hints are issued three times a year. Bulletins of the Dairy and Cold Storage Branch relating to the dairying and cold storage industries in Canada, the making of butter and cheese, cow testing, dairying experiments, co-operation, etc. Reports, bulletins, pamphlets, etc., of the Live Stock Branch on cattle, sheep, swine, poultry, marketing of eggs, wool, etc. Bulletins of the Health of Animals Branch with regulations as to contagious abortion; rabies; sheep scab; actinomycosis; anthrax; glanders; hog cholera; maladie du coit; tuberculosis; foot-and-mouth disease; quarantine and meat inspection. Bulletins and Reports of the Seed Branch as to Seed-testing, the production and use of seed grains, the Seed Control Act, and the Fertilizers Act. Bulletins and circulars of the Entomological Branch and instructions to importers of nursery stock. Reports of the Canadian Seed Growers' Association. Fodder and Pasture Plants, by George H. Clark, B.S.A., and M. Oscar Malte, Ph.D., 143 pages, 27 plates, price 50 cents. Bulletin on the Maple Sugar Industry; Agricultural Instruction Act; Publications Filing System.

Dominion Experimental Farms.—(1) Report of the Director (contains summary of reports of Divisions, Farms and Stations); (2) Animal Husbandry Division; (3) Bee Division; (4) Botany Division; (5) Chemistry Division; (6) Field Husbandry Division; (7) Illustration Stations Division; (8) Poultry Division; (9) Tobacco Division; (10) Horticultural Division; (11) Cereal Division; (12) Forage Crops Division; *Experimental Farms and Stations Reports*; (13) Agassiz, B.C.; (14) Indian Head, Sask.; (15) Nappan, N.S.; (16) Charlottetown, P.E.I.; (17) Invermere, B.C.; (18) Sidney, B.C.; (19) Brandon, Man.; (20) Morden, Man.; (21) Cap Rouge, Que.; (22) Scott, Sask.; (23) Swift Current, Sask.; (24) Kapuskasing, Ont., and La Ferme, Que.; (25) Kentville, N.S.; (26) Lennoxville, Que.; (27) Ste. Anne de la Pocatière, Que.; (28) Rosthern, Sask.; (29) Lethbridge, Alta.; (30) Lacombe, Alta.; (31) Summerland, B.C.; (32) Experimental Sub-stations—Beaverlodge, Alta.; Fort Vermilion, Alta.; Grouard, Alta.; Fort Resolution, N.W.T.; Swede Creek, Yukon; Salmon Arm, B.C.

The pamphlet entitled "List of Publications" contains a list of the publications of the Department numbering more than three hundred. These publications include, in addition to the reports, bulletins and pamphlets on field crops, live stock, dairying, orchard and garden insects and plant diseases, poultry and miscellaneous topics. With few exceptons, the publications of the Department are free on application to its Publications Branch.

Interior.—Annual Report, including Reports from the Dominion Lands Surveys, Dominion Parks, Forestry, Irrigation and Water Power Branches. Pamphlets, reports, bulletins, etc., of the respective branches:—

Topographical Surveys.—(1) Annual Report of the Topographical Surveys Branch, and accompanying maps. Price 5c. (2) Manual of Instructions for the Survey of Dominion Lands. Price 50c. Supplement to the Manual. Price 50c. (3) Rules and Regulations of the Board of Examiners for Dominion Land Surveyors, and programme of the subjects of the various examinations. (4) The Selkirk Range (in two volumes), by A. O. Wheeler, F.R.G.S. Price $1. (5) Copying Camera of the Surveyor General's Office. (6) Photographic Methods Employed by the Canadian Topographical Survey, by A. O. Wheeler, F.R.G.S. (7) Precise Measuring with Invar Wires and the Measurement of the Kootenay Base, by P. A. Carson, D.L.S. (8) Report on Levelling Operations, from 1908 to 1914, by J. N. Wallace, D.L.S. Price 35c. (9) Triangulation of Part of the Railway Belt of British Columbia, by H. Parry, D.L.S. (10) Description, Adjustments and Methods of Use of the 6" Micrometer Block Survey Reiterating Transit Theodolite, by W. H. Herbert, B.Sc. (11) Papers on Descriptions for Deeds. (12) Description of the townships surveyed in the different Provinces, issued yearly since 1909. (13) Description of the surveyed townships in the Peace River District. (14) Descriptions of lands comprised within the Fort Pitt Sectional Map, consisting of townships 49 to 56, ranges 15 to 28, west of the third meridian. (15) Description of Surveyed Lands in the Railway Belt of British Columbia (in three parts). (16) Extracts from Reports on townships east of the principal meridian, received from surveyors to July 1, 1914. (17) Extracts from Reports on townships 1 to 16 west of the principal meridian, received from surveyors to July 1, 1914. (18) Extracts from Reports on townships 17 to 32 west of the principal meridian, received from surveyors to July 1, 1914. (19) Extracts from Reports on townships 33 to 88 west of the principal meridian, received from surveyors to March 31, 1915. (20) Extracts from reports on townships 1 to 16 west of the second meridian received from surveyors to March 31, 1915. (21) Astronomical field tables for use of Canadian land surveyors showing the altitude and azimuth of the pole star. (22) Explanation of the Astronomical Field Tables for the use of the Land Surveyors of Canada. (23) Tests of small telescopes at the Laboratory of the Dominion Lands Survey. (24) Alberta and British Columbia Boundary, Part 1, 1913 to 1916. Price 50c. Report and Atlas, $1. (25) Description of, and Guide to Jasper Park, 50 cents. (26) The Testing of Aneroid Barometers at the Laboratory of the Dominion Lands Survey. (27) Testing of time-pieces at the Laboratory of the Dominion Lands Survey. (28) Description of Boundary Monuments erected on surveys of Dominion Lands, 1871-1917, by H. L. Seymour, D.L.S. (29) Standardization of Measures of length at the Laboratory of the Dominion Lands Survey. (30) The Testing of Thermometers at the Laboratory of the Dominion Lands Survey. (31) Descriptions of townships between the third and fourth

meridians, 1886. (32) Descriptions of the townships west of the fourth and fifth meridians, 1886. *Maps.*—(33) Township Plans, Price 10c. (34) Plans of Parishes, Townplots and Settlements, 25c. to $1.00; (35) Sectional maps of western provinces and Yukon Territory, price 5c.; (36) New style sectional maps in greater detail showing roads, telephones, buildings, price 25c.; (37) Mount Robson and mountains north of Yellowhead pass; (38) Banff and vicinity; (39) Central part of Jasper Park, in 6 sheets, price 15c. per sheet; (40) Map of the same area, in 1 sheet; (41) Crowsnest forest and Waterton Lakes Park, in 5 sheets; (42) Waterton Lakes Park; (43) Magnetic maps; (44) Alberta—British Columbia boundary maps, 10c. per sheet; (45) Land classification maps of the following districts—Peace River, The Peace River Block, St. Paul de Metis, Northeast of Prince Albert, Winnipegosis, Lac la Biche, Pouce Coupé, St. Brieux, Whitecourt, Athabaska, and Dauphin; (46) Mining districts of Rice lake, price 5c., and Flinflon lake, price 15c.; (47) Northern Selkirk mountains and the Big Bend of the Columbia; (48) Mackenzie and Slave rivers, in 14 sheets; (49) List of maps and publications issued by the Topographical Surveys Branch. (Publications of the Topographical Surveys Branch may be obtained on application to the Distribution Office, Department of Public Printing and Stationery for No. 1; to the Secretary, Board of Examiners for Dominion Land Surveyors, for No. 3, and to the Surveyor General for the other Nos.).

Dominion Observatory.—Publications of Dominion Observatory, Vol. V: No. 8, A Spectroscopic Study of Early Class B Stars (Third Paper), by F. Henroteau, Ph.D.; No. 9, The Location of Epicentres, 1919, by W. W. Doxsee, M.A.; No. 10, Gravity, by A. H. Miller, M.A.; No. 11, The Spectroscopic System Delta Ceti (First Paper), by F. Henroteau, Ph.D.; Vol. VI: Part 1, Sect. 1-4, Spectroscopic Investigations of the Sun, by Ralph E. de Lury, M.A., Ph.D.; Vol. VIII: No. 1, The Spectroscopic System Theta Ophiuchi, by F. Henroteau, Ph.D.; No. 2, The Location of Epicentres, 1920, by W. W. Doxsee, M.A.; No. 3, the Spectroscopic System Beta Canis Majoris, by F. Henroteau, Ph.D.; No. 4, The Spectroscopic System Sigma Scorpii, Second Paper, by F. Henroteau, Ph.D. (See also Year Books, 1919, pp. 630-631; 1921, pp. 838-839).

Reclamation.—Irrigation Reports, 1912 to 1918-19; Annual Reports, 1919-20 and 1920-21; Reports of the Western Canada Irrigation Association Conventions (1st to 11th Convention); Report of the International Irrigation Congress, 1914. Bulletins: (1) Irrigation in Alberta and Saskatchewan; (2) Alfalfa Culture; (3) Climatic and Soil Conditions in C.P.Ry. Co's Irrigation Block; (4) Duty of Water Experiments and Farm Demonstration Work; (5) Farm Water Supply; (6) Irrigation Practice and Water Requirements for Crops in Alberta. Pamphlets: "Practical Information for Beginners in Irrigation," by W. H. Snelson. Address by Mr. S. G. Porter on "Practical Operation of Irrigation Works." Address by Dr. Rutherford on "Inter-dependence of Farm and City." Addresses by Mr. Don H. Bark on "The Actual Problem that Confronts the Irrigator," "Practical Irrigation Hints for Alberta," and "Alfalfa Growing."

Dominion Water Powers.—Annual Reports for 1912-13 to 1921-22. The Annual Reports of the Branch previous to 1913 are included in the Annual Report of the Department. Water Resources Papers: I. *Reports of Special or General Interest*: 2, Report on Bow river Power and Storage Investigations, by M. C. Hendry; 3, Report on Power and Storage Investigations, Winnipeg river, by J. T. Johnston; 5 and 11, Preliminary and final Report on the Pasquia Reclamation Project, by T. H. Dunn; 6, Report on Cost of Various Sources of Power for Pumping in connection with the South Saskatchewan Water Supply Diversion Project, by H. E. M. Kensit; 7, Report on the Manitoba Water Powers, by D. L. McLean, S. S. Scovil and J. T. Johnston; 10, General Guide for Compilation of Water Power Reports of Dominion Water Power Branch, prepared by J. T. Johnston; 12, Report on Small Water Powers in Western Canada and Discussion of Sources of Power for the Farm, by A. M. Beale; 13, Report on the Coquitlam-Buntzen Hydro-Electric Development, by G. R. G. Conway; 16, Water Powers of Canada, a series of five pamphlets prepared for distribution at the Panama-Pacific Exposition, 1915, by G. R. G. Conway, P. H. Mitchell, H. G. Acres, F. T. Kaelin and K. H. Smith; 17, Canadian Hydraulic Power Development and Electric Power in Canadian Industry, by C. H. Mitchell; 20, Report on the Interest Dependent on Winnipeg river Power, with Special Reference to the Capital Invested and the Labour Employed, by H. E. M. Kensit; 27 and 33, Directories of Central Electric Stations

in Canada to January 1, 1922, by J. T. Johnston; 32, Water Resources Index Inventory, by J. T. Johnston. II. *Surface Water Supply Reports*: (A) Atlantic Drainage south of St. Lawrence river, including Nova Scotia, New Brunswick, Prince Edward Island and Southeastern Quebec; 29, for the climatic year ending September 30, 1920, by K. H. Smith; (B) St. Lawrence and Southern Hudson Bay Drainage in Ontario; 28 and 34, for the climatic years ending September 30, 1920 and 1921, by S. S. Scovil; (C) Arctic and Western Hudson Bay Drainage (and Mississippi Drainage in Canada) in Alberta, Saskatchewan, Manitoba, extreme Western Ontario, and Northwest Territories; 4, 19, 22, 24, 26, 31 and 36, from 1912 to the climatic year ending September 30, 1921, by M. C. Hendry (to 1918) and C. H. Attwood and A. L. Ford. Previous to 1919-20 surveys in Alberta and Saskatchewan were carried on and published by the Reclamation Service, Department of the Interior; (D) Pacific Drainage in British Columbia and the Yukon Territory: 1, 8, 14, 18, 21, 23, 25, 30 and 35, from 1911 to the climatic year ending September 30, 1921, by P. A. Carson (to 1912) and R. G. Swan.

Natural Resources Intelligence Service.—Maps.—Land Maps of Northern Alberta, Southern Alberta, Saskatchewan, and Manitoba; Cereal Maps of Manitoba, Saskatchewan, and Alberta; Small Land Map of Manitoba, Saskatchewan and Alberta; Bank Maps of Ontario, Quebec, Manitoba, Saskatchewan and Alberta; Land Registration and Judicial Districts Map of Manitoba, Saskatchewan and Alberta; Fisheries Map of the Atlantic Coast; Map of the World; Resource Map of Canada; Railway Map of Canada in eight sheets, also in one sheet form; Standard Topographical Sheets—Sault Ste. Marie; Sudbury; Nipissing; Gatineau; Montreal-Quebec; Montmagny; Rainy river; English river; lake Nipigon; Michipicoten; Mattagami; Harricanaw; Chibougamau; Roberval; Tadoussac; Bonaventure; Gaspé; Belleville; Cape Breton; Cornwall; French river; Gowganda; Guelph; Halifax; Hamilton; Kingston; London; Manitoulin; Moncton; Montreal; Ottawa; Parry Sound; Pembroke; Prince Edward Island; Quebec; Sault Ste. Marie; Sherbrooke; Timiskaming; Toronto; Truro; Windsor and Yarmouth; Land District Maps of Dauphin; Winnipeg; Battleford; Prince Albert; Calgary; Edmonton; Grande Prairie and Peace River Land Agencies; Economic Atlas. *Reports.*—The Unexploited West; The Lower Athabaska and Slave River District; The Province of New Brunswick; The Natural Resources of Nova Scotia; Supplement to Cereal Maps; Compact Facts; Lists of Unoccupied Farms for Sale in Manitoba, Saskatchewan, Alberta, Nova Scotia, New Brunswick, and Prince Edward Island; Oil and Gas in Western Canada; Central British Columbia; New Oil Fields of Northern Canada; Agricultural Loans.

Mining Lands Branch.—A two sheet map of Alberta, showing the coal mining rights disposed of; a map of southern Saskatchewan showing coal rights disposed of; Yukon Placer Mining Act; Quartz Mining Regulations; Coal Mining Regulations; Placer Mining Regulations; Quarrying Regulations; Petroleum and Natural Gas Regulations; Potash Regulations; Dredging Regulations relating to the Yukon Territory; Dredging Regulations relating to beds of rivers outside of the Yukon Territory; Regulations relating to bar-digging on the North Saskatchewan river; Regulations for the issue of oil and gas permits in the Northwest Territories; Alkali Mining Regulations; Regulations for the issue of permits to mine coal for domestic purposes; Regulations for the issue of permits to remove sandstone and gravel from the beds of rivers and lakes.

Canadian National Parks.—The Annual Report of the Commissioner; Traffic and Motor Regulations; Banff Information; The Playground of the World; Through the Heart of the Rockies and Selkirks; The Banff-Windermere Highway; Guide to Jasper National Park; Glaciers of the Rockies and Selkirks; Guide to the Geology of the Canadian National Parks on the C.P.R. between Calgary and Revelstoke; Handbook of the Rocky Mountains Park Museum; Automobile and Livery Tariffs for Banff and Kootenay National Parks; Automobile and Livery Tariffs for Yoho and Glacier National Parks; Automobile and Livery Tariffs for Jasper National Park; Map of Banff National Park; Map of Yoho National Park; Map of Glacier National Park; Map of Mount Revelstoke National Park; Map of Waterton Lakes National Park; Map of Central part of Jasper National Park; Map of Banff and vicinity; Migratory Birds Convention Act; Bird Houses and their Occupants; Lessons on Bird Protection; Loi concernant les Oiseaux Migrateurs; Maisons d'Oiseaux et leurs Occupants; Oiseaux d'un Jardin Manitobain; La Prohibition de la Chasse au Printemps; Les Oiseaux Sauvages; Les Oiseaux

Amis du Canada; Historic Sites series No. 1, The Lake Erie Cross, French and English; H.S. Series No. 2, Guide to Fort Chambly, French and English; H.S. Series No. 3, Guide to Fort Lennox, French and English; H.S. Series No. 4, Guide to Fort Anne, English.

Forestry.—Annual Reports of the Director of Forestry, 1914, 1915, 1917 to 1922 (inclusive). *Bulletins* (where number and title are omitted, the document is out of print): (1) Tree-Planting on the Prairies; (11) Forest Products of Canada, 1909: Lumber, Square Timber, Lath, and Shingles; (14) Do.: Cross-ties purchased; (22) Forest Products of Canada, 1910: Cross-ties; (23) Do.: Timber used in Mining Operations; (27) Do.: Cooperage; (34) Do.: Lumber, Square Timber, Lath, and Shingles; (35) Do.: Poles and Cross-ties; (36) Wood-using Industries of Ontario; (38) Forest Products of Canada, 1912: Pulpwood; (39) Do.: Poles and Ties; (40) Do.: Lumber, Square Timber, Lath, and Shingles; (46) Forest Products of Canada, 1913: Pulpwood; (48) Do.: Lumber, Lath, and Shingles; (49) Treated wood-block Paving; (51) Game Preservation in the Rocky Mountains Forest Reserve; (52) Forest Products of Canada, 1913 (being Nos. 46, 47, and 48); (53) Timber Conditions in the Smoky River Valley and Grande Prairie Country; (54) Forest Products of Canada, 1914: Pulpwood; (56) Do.: Lumber, Lath, and Shingles; (57) Forest Products of Canada, 1914: (Bulletins 54, 55, and 56); (58a) Forest Products of Canada, 1915: Lumber, Lath, and Shingles; (58b) Do.: Pulpwood; (58c) Do.: Poles and Cross-ties; (59) Canadian Woods for Structural Timbers; (60) Canadian Douglas Fir: its mechanical and physical properties; (61) Native Trees of Canada (price, 50 cents); (63) Wood-using Industries of Quebec; (65) Forest Products of Canada, 1917: Poles and Cross-ties; (66) Utilization of Waste Sulphite Liquor (price, 50 cents); (67) Creosote Treatment of Jack Pine and Eastern Hemlock for Cross-ties; (68) Forest Fires in Canada, 1917; (69) The Care of the Woodlot; (70) Forest Fires in Canada, 1918; (71) Canadian Sitka Spruce: its mechanical and physical properties; (72) Success in Prairie Tree Planting; (73) Tree-repairing; (74) Distillation of Hardwoods in Canada (price, 25 cents). *Circulars*: (5) Planning a Tree Plantation for a Prairie Homestead; (6) Preservative Treatment of Fence-posts; (8) The Forest Products Laboratories; (9) Chemical Method for Utilizing Wood Wastes; (12) The Empire Timber Exhibition; (13) The Cascara Tree in British Columbia; (14) Commercial Forest Trees of Canada; (15) Historical Sketch of Canada's Timber Industry. *Manual*: Methods of Communication Adapted to Forest Protection (price, $1.00, post-free). Dominion Forestry Branch Message Code (price, 10 cents, post-free).

Northwest Territories and Yukon.—Northwest Territories Act; Northwest Territories Game Act; Migratory Birds Convention Act; Northwest Territories Timber Regulations; Northwest Territories Hay and Grazing Regulations; Yukon Territory, its History and Resources; Yukon Act; Yukon Land Regulations; Yukon Homestead Regulations; Yukon Hay and Grazing Regulations; Northwest Territories Oil and Gas Regulations; Report of the Royal Commission upon the possibilities of the Reindeer and Musk-Ox Industries in the Arctic and Sub-Arctic Regions of Canada; Manual for Operators under Oil and Gas Regulations.

Immigration and Colonization.—Atlas of Canada, United Kingdom and United States editions. Eastern Canada, United Kingdom and United States editions. Canada West, United Kingdom and United States editions. Report of the Chief Inspector of British Immigrant Children. Immigration Act and Regulations. A Manual of Citizenship. Annual Report.

Finance.—Annual Reports of the Public Accounts of the Dominion of Canada. Monthly Statements of the Chartered Banks of Canada. Estimates.

Insurance.—Quarterly Statement showing List of Licensed Companies. Annual Abstract of Statements of Insurance Companies in Canada (subject to correction). Annual Reports of the Insurance Department, Vol. I (Fire and Miscellaneous), Vol. II (Life Companies). Annual List of Securities held by Insurance Companies in Canada with Department's Valuation thereof. Annual Report of Loan and Trust Companies incorporated by the Dominion.

National Defence.—*Militia and Defence.*—Annual Report; Militia List; Militia Orders; General Orders. *Naval Service.*—Naval Service Annual Report.

The Naval Service Department was established by Act of Parliament in 1910. It comprised Naval Service, Fisheries Protection Service, Tidal and Current Survey, Hydrographic Survey and Radiotelegraph Service.

Trade and Commerce—Annual Report. Annual Report *re* Mail Subsidies and Steamship Subventions. Annual Report of Board of Grain Commissioners for Canada. Annual Report of Weights and Measures, Electricity and Gas. Final Report of the Fuel Controller (1919).List of Licensed Elevators, etc. Grain Inspection in Canada, (1914). Publications of the Commercial Intelligence Branch. Commercial Intelligence Journal (Weekly). Trade with China and Japan (1914). Russian Trade (1916). The German War and its relations to Canadian Trade (1914). Toy-making in Canada (1916). The Timber Import Trade of Australia (1917). Barbados, Preferential Tariff of. Canadian Economic Commission to Siberia (1919), Confidential Appendix. Canada-West Indies Conference (1920). Dominion Grain Research Laboratory (1920). Electrical Standards and their application to trade and commerce. Mexico as a field for Exports (1921). Motion Pictures, Catalogue of. Report of Special Trade Commission to Great Britain, France and Italy—French and English (1916). Rules and Forms of the Canadian Patent Office. Patent Office Record (weekly). Trade after the War (1916). Trade of the New Countries of South East Europe (1921). Trade between Canada and the British West Indies Colonies (1920). West Africa and its Opportunities for Canadian Trade (1921). Chinese Markets for Canadian Products (1919). Imports into Canada from the United States (1921). Markets of Jamaica, and the Republics of Colombia, Venezuela, and Panama (1922), price, 35 cents. Packing for Overseas Markets. The Indian Empire as a Market for Canadian Products (1922). Trade with Egypt (1921). Trade with Greece (1921). Trade with South China (1918). Trading Opportunities in Scandinavia (1922). Trading with Spain (1920). Trading with Switzerland (1922).

Publications of the Dominion Bureau of Statistics.—For the publications of the Bureau, covering the field of Canadian statistics, see pages 961–969.

Labour.—Monthly: The Labour Gazette (published in English and French at the subscription price of 20 cents per annum, averaging over 100 pages monthly.) Annually: Report of the Department of Labour. Report of Proceedings under the Industrial Disputes Investigation Act, 1907. Labour Organization in Canada, (a Report is published for each year about May or June). Labour Legislation of Canada as existing December 31, 1920. (A supplementary Report on Labour Legislation during the preceding year is published annually in April or May). Report of Proceedings under the Employment Offices Co-ordination Act. Report of Proceedings under the Technical Education Act. Report of Proceedings under the Government Annuities Act.

Secretary of State.—Annual Report. Regulations and Despatches Respecting Extradition Proceedings. List of Companies Incorporated under the various Companies Acts of the Parliament of Canada from 1867 to December 31, 1913. Copies of Proclamations, Orders in Council and Documents relating to the European War. Method of conducting correspondence between the Dominion and Provincial Governments.

Railways and Canals.—Annual Report of the Department. Publications of the Highways Branch.

Board of Railway Commissioners for Canada.—Annual Report. Judgements. Orders. Regulations and Rulings.

Marine and Fisheries.—Marine Annual Report, containing Harbour Commissions, etc. Steamboat Inspection. List of Canadian Shipping. Reports of Expeditions to Hudson Bay, Northern Waters and Arctic Archipelago. Canadian Port Directory. List of Lights, etc., in Canada: (a) Pacific Coast; (b) Atlantic Coast; (c) Inland Waters.

Tidal and Current Survey.—Tide Tables, published annually, for the East Coast, Pacific Coast, and Hudson Bay and Strait; also three abridged editions for St. Lawrence region, Bay of Fundy and Strait of Georgia. Currents in the Gulf of St. Lawrence, the entrance to the St. Lawrence, and the Southeast Coasts of Newfoundland and Belle Isle Strait. Tables of Currents in the Bay of Fundy. Tides at the head of the Bay of Fundy. Tide levels on the East Coast of Canada and Pacific Coast. Tides and Tidal Streams, a general explanation of the tides.

Radiotelegraph Branch.—Proceedings of the International Radiotelegraph Conference in London, 1912. Chart showing the Radiotelegraph stations in the Dominion of Canada. Postmaster General's Handbook for Radiotelegraph Operators (Instructions *re* handling of traffic, etc.).

Hydrographic Survey.—International Waterways Commission Report. Sailing Directions: St. Lawrence Pilot above Quebec; St. Lawrence Pilot below Quebec (English and French); Sailing Directions for the Canadian Shores of Lake Ontario; Canadian Shores of Lake Huron and Georgian Bay; Sailing Directions for the Canadian Shores of Lake Superior. Charts: 34 charts of the St. Lawrence river between Pointe-des-Monts and Cornwall; Ottawa river: 2 sections covering Lake of Two Mountains; Lake Ontario: 11 coast charts with plans of harbours; Lake Erie: 2 sheets, plans of harbours and anchorages; Lake Huron: 6 coast charts; Georgian Bay: 2 charts; North Channel of Lake Huron: 3 charts; Lake Superior: 12 coast charts; Lake Winnipeg: 2 charts; Pacific Coast in the vicinity of Prince Rupert and Queen Charlotte Islands: 11 charts; Atlantic Coast in the vicinity of Halifax Harbour, St. John Harbour and Sydney: 7 charts; Hudson Bay: 7 charts; International Waterways Commission Boundary charts between St. Regis and Pigeon bay: 29 charts; Gulf of St. Lawrence in the vicinity of Port Borden and Bathurst: 2 charts; Gulf Telegraph chart of the gulf of St. Lawrence, lower St. Lawrence River to Montreal and Maritime Provinces showing the telegraph and telephone lines and stations, radiotelegraph, storm and marine signal stations, light-houses and fog alarms operated by or for the Government of Canada, the railway lines, submarine cables, tracks of vessels and tables of nautical distances: one chart; Charts of the St. Lawrence river between Cape Magdalen and Cornwall: 40 charts; the Saguenay river, vicinity of Chicoutimi: 1 chart; Lake of the Woods: 1 chart; Vicinity of Vancouver island and adjacent mainland: 4 charts.

Indian Affairs.—Annual Report. Indian Act, 1906, with amendments to date. Schedule of Indian Reserves, 1913. Indian Treaties and Surrenders, Vols. I, II, III.

King's Printer and Controller of Stationery.—The Canada Gazette, published weekly by authority, with occasional supplements and extras, subscription, $4 per annum payable in advance, single copies, 10 cents each. (Contains weekly a list of current Government publications, as required by Order in Council 1,522). Judgments of the Board of Railway Commissioners, bi-monthly, $3 per annum, single copies, 20 cents; Canada Law Reports, published monthly, yearly subscription, $6. Dominion Statutes, 1922, $4. Acts, Public and Private, with amendments to date, 10 cents to $1.00 a copy. Canadian Postal Guide, 50 cents yearly, supplements, 25 cents. Parliamentary Debates, "Hansard," issued daily during session, French and English, $3 per session each for House of Commons and Senate Debates, single copies, 5 cents. Prices of blue-books are in nearly every case printed upon the front cover and are based practically on the cost of paper and presswork. They may be ordered direct from the Superintendent of Stationery, Department of Public Printing and Stationery, or through any bookseller in the Dominion.

Mines.—The Work of the Department of Mines, chiefly scientific and investigatory, is performed by the Department's four principal units, viz: the Geological Survey, Mines Branch, Victoria Memorial Museum Branch, and the Explosives Division.

The Geological Survey carries on areal and economic investigation and research work in mineralogy; The Mines Branch carries on field and laboratory investigations for the furtherance of the mining and metallurgical industries, and the compilation of statistics and information relating to them; the Victoria Memorial Museum Branch carries on scientific investigations in anthropology, archæology, zoology and botany; and the Explosives Division, in the administration of the Explosives Act, 1914, has supervision of the manufacture, testing, storage and importation of explosives, and the issuing of licenses under the Act.

The Department of Mines publishes an annual administrative report covering the activities of the whole Department, and the branches publish annual reports as well as memoirs and bulletins on special investigations.

The Geological Survey Branch, from 1842 to 1904, published annual volumes. From 1904 to 1910 upwards of 80 reports were issued, all separately. Since then, the publications have consisted of memoirs and bulletins appearing at irregular

intervals, an annual report and miscellaneous publications, including Geological Guide Books and Handbooks. The subjects dealt with include Areal and Economic Geology of particular districts, Mineralogy, Palæontology, Ornithology, Botany, Anthropology and related topics. Publications on the last three subjects, namely, Ornithology, Botany and Anthropology, as well as all Biological papers, are issued by the newly constituted *Victoria Memorial Museum Branch*.

The Mines Branch, from its beginning in 1908, has published annual reports of Mineral Production and summary reports covering the investigations of the Metalliferous and Non-Metalliferous Mines Divisions, the Fuel Testing and Ore-Dressing Divisions, and the Ceramic, Road Materials and Chemical Divisions, and the operations of the Dominion Assay Office. Reports have also been published, dealing with the technology of most of the economic minerals of Canada.

The Explosives Division has published annual reports since 1919.

The publications of the Department of Mines cover the Geology and Mineral Resources of the greater part of Canada. Most of the reports are available free of charge, or for a nominal price, on application to the Deputy Minister of Mines. Some of the reports may be had in French translations.

Commission of Conservation.—Annual Reports, 1910-19; Fire Waste in Canada, J. Grove Smith; Altitudes in Canada, James White, F.R.S.C., F.R.G.S.; Dictionary of Altitudes in Canada, James White, F.R.S.C., F.R.G.S. For the numerous other reports of the Commission of Conservation, see 1919 Canada Year Book, pp. 635-636.

Advisory Council for Scientific and Industrial Research.—Annual Reports of the Administrative Chairman, 1917-18, 1918-19, 1919-20, 1920-21 and 1921-22. *General Reports.*—(1) The Briquetting of Lignites, R. A. Ross, E.E.; (2) The Recovery of vapours from gases, Harold S. Davis, M.A., Ph.D., Mary Davidson Davis, B.A.; (3) The de-tarring of Gas by Electrical precipitation, J. G. Davidson, Ph.D.; (4) Nicotine and Tobacco Waste, A. D. Hone, M.A.; (5) Canadian Waste Sulphite Liquor as a source of Alcohol, Vernon K. Krieble, Asst. Prof., Dept. Chemistry, McGill University; (6) An Investigation into the Question of early Putrefaction of Eviscerated Fish in which the Gills have been left, Louis Gross, M.D.; (8) A method of Smelting Titaniferous Iron Ore, W. M. Goodwin, B.A., B.Sc.; (9) Food Requirements of the Ranch Fox, G. Ennis Smith, B.A., B.Sc.; (10) Fuel Saving Possibilities in House Heating, L. M. Arkley, M.Sc. and James Govan. *Bulletins:* (1) The need for Industrial Research in Canada, Frank D. Adams, Sc.D., LL.D., F.R.S.; (2) Researches on Sound Measurement, Louis V. King, M.A., D.Sc., F.R.S.C.; (3) How to Handle Frozen Fish, E. E. Prince, D.Sc., LL.D.; (4) Hints on Frozen Fish, E. E. Prince, D.Sc., LL.D.; (5) Science and Industry, Prof. J. C. Fields, Ph.D., F.R.S.; (6) The Heating of Houses, Coal and Electricity Compared, A. S. L. Barnes; (7) The manufacture of Ethyl Alcohol from Wood Waste, G. H. Tomlinson, B.A.; (8) Some Problems of the Fox Raising Industry, A. Hunter, M.A., B.Sc., M.B., Ch.B.; (9) The Honorary Advisory Council for Scientific and Industrial Research and its Work, Frank D. Adams, ScD., LL.D., F.R.S.; (10) A Plan for the Development of Industrial Research in Canada, R. F. Ruttan, B.A., M.D., D.Sc., F.R.S.C.; (11) Red Discolouration of Cured Codfish, by F. C. Harrison, D.Sc., F.R.S.C. and Miss Margaret E. Kennedy, B.A., M.Sc.; (12) The Discolouration, Smut or Blackening of Canned Lobster, by F. C. Harrison, D.Sc., F.R.S.C. and E. G. Hood, Ph.D.

Copies of these Reports and Bulletins will be forwarded gratis to persons interested, upon request to the Secretary of the Council for Scientific and Industrial Research.

Civil Service Commission.—Annual Report, including lists of permanent appointments, promotions and transfers. Regulations of the Civil Service Commission. General Information respecting Civil Service Examinations.

Department of Health.—" The Canadian Mother's Book"; General Venereal Disease Circular No. 1 to the Medical Profession of Canada: "Information concerning Venereal Disease"; General Venereal Disease Circular No. 2 to the Medical Profession of Canada: " Wassermann Test "; General Venereal Disease Circular No. 3 to the Medical Profession of Canada: " Microscopic Examination "; General Venereal Disease Circular No. 4 to the Medical Profession of Canada: " Diagnosis and Treatment of Venereal Disease "; General Venereal Disease Circular No. 1

to the Public: "Information for Men"; General Venereal Disease Circular No. 2 to the Public: "Information for Young Women"; General Venereal Disease Circular No. 3 to the Public: "Information for Parents." Little Blue Books, Home Series: (1) Good Wishes for you from Canada; (2) How to Build the Canadian House; (3) How to Make our Canadian Home; (4) How to Make Outpost Homes in Canada; (5) Canadians Need Milk; (6) How we Cook in Canada; (7) How to Manage Housework in Canada; (8) How to Take Care of Mother; (9) How to Take Care of the Family; (10) How to Take Care of the Baby; (11) How to Take Care of the Children; (12) Household Cost Accounting in Canada; (13) How to Take Care of Household Waste; (14) How to Avoid Accidents and Give First Aid. All published in French and English.

Other Departments.—In addition to the publications above enumerated, annual reports are issued by the Department of Justice on the Penitentiaries of Canada, the Department of External Affairs, the Public Works and the Auditor General.

IV.—PUBLICATIONS OF PROVINCIAL DEPARTMENTS.

List of Principal Publications of the Provincial Governments of Canada, as compiled from information supplied by the respective Governments.

Note.—The numbers within brackets are the numbers of the Bulletins. The publications of the larger provinces are arranged by Departments.

PRINCE EDWARD ISLAND.

Journal of the Legislative Assembly. Statutes. General index to Statutes of P.E.I., 1869-1918. Royal Gazette. Annual Reports of the Provincial Auditor on Public Accounts and of the Departments of Public Works, Education, Agriculture, Falconwood Hospital (for the Insane) and Vital Statistics.

NOVA SCOTIA.

Royal Gazette. Statutes, Journals and Proceedings of Legislative Council. Journals and Proceedings of the House of Assembly. Journal of Education. Manual of the Public Instruction Acts and Regulations of the Council of Public Instruction, 1921. Annual Reports on Public Accounts, Vital Statistics, Statistics of Incorporated Towns and Municipalities, Public Health, Education, Industries and Immigration, Agriculture, Crown Lands, Mines, Subsidized Railways and other Public Works. Rural Telephones, Humane Institutions, Public Charities, including report of Hospital and Sanatorium, Penal Institutions, Neglected Children, Temperance, Publicity, Printing, Legislative Library, Utility Board and Workmen's Compensation Board. Also Annual Reports of the Provincial Secretary, the Factory Inspector and of the Highway Board, Power Commission and Game Commissioners.

NEW BRUNSWICK.

Royal Gazette. Statutes. Annual Reports of the Auditor General, of the Board of Health, of the Departments of Education and Agriculture (including Horticulture), Annual Reports on Public Works, Crown Lands, the Hospital for the Insane, the Factory Report, Report of the Jordan Memorial Tuberculosis Sanatorium at River Glade, Report of Women's Institutes, and Report of Chief Inspector under Prohibition Act, Report of the Workmen's Compensation Board. Official Year Book.

QUEBEC.

Note.—The titles of publications available in the English language are printed in English.

Attorney General.—Annual Report of Prison Inspectors; Annual Report of Public Utilities Commission.

Provincial Secretary.—Annual Report of the Secretary and Registrar; Annual Report of the Superior Board of Health of the Province of Quebec; Statistical Year Book; Education Statistics; Financial Statistics of School Corporations; Municipal Statistics (annual); Judicial Statistics (annual); Statistics of the Penal Establishments (annual); Statistics of the Benevolent Institutions (annual); The

Official Gazette (weekly); The Statutes of the Province (annual); Revised Statutes of the Province (1909); List of Municipal Corporations (annual); Rapport de l'Archiviste.

Treasury.—Annual Statement of Public Accounts; Annual Estimates.

Lands and Forests.—Annual Report of the Minister; Surveyed Townships and Explored Territories, 1889; Richesse Forestière de la Province de Québec, J. C. Langelier, 1905; La Forêt, Fernow, 1905; Arbres de Commerce de la Province de Québec, 1906; Table of Families of Twelve Children, Eugène Rouillard, 1904, 1906; Townships Surveyed and Territories Explored, 1908; List of Timber License Holders, 1911; Dictionnaire des Lacs et Rivières de la Province de Québec, Eugène Rouillard, 1914, Bulletin No. 1 of the Forestry Service; Table of Water Powers granted by the Province of Quebec, from 1st July, 1867, to 31st December, 1913, A. Amos; Bulletin No. 2 of the Forestry Service, Piché and Bédard, 1914; No. 1, La Rouille vésiculaire du Pin blanc, G. C. Piché; The Water Powers in the Province of Quebec (Illustrated), 1917; Nomenclature of the Geographical Names in the Province of Quebec, Quebec Geographical Commission; Annual Report of the Quebec Streams Commission; Circulaire No. 3, Les Industries forestières de la Province de Québec, G. C. Piché.

Agriculture.—*Annual Reports:* Department of Agriculture; Competition for Agricultural Merit; Dairymen's Association; Pomological Society; Journal of Agriculture and Horticulture, illustrated monthly. *Bulletins:* (1) Plans de fromageries et beurreries; (2) Le Drainage Pratique, G. Michaud, 1914; (7) Le Cheval du Cultivateur, J. D. Duchêne (French and English), 1914; (8) Culture des Céréales, Collège Macdonald, 1914; (14) La Culture du Trèfle; (15) La Culture du Blé-d'Inde Fourrager; (16) Guide de l'Arboriculteur; (24) The Great Fallacy of White Bread; (25) Etude Sommaire sur les Céréales; (29) Choix de la Semence; (39) Celery Culture; (40) How to Plant your Fruit Trees; (42) De la Protection des Plantes; (43) Bean Culture; (44) Vegetable Culture; (45) Liste des Présidents et Secrétaires des Sociétés Agricoles; (47) Le Lapin; (48) Manuel de médecine Vétérinaire; (49) Home Canning of Fruit Products; (50) Sheep Raising for Profit in Quebec; (52) Breeders' Guide of the Province of Quebec; (53) Le Fumier de Ferme—Composition—Valeur—Conservation; (55) L'élevage des volailles dans les Villes et les Villages; (56) De la Culture des Racines Fourragères; (61) Les engrais Chimiques et amendements; (62) Le Rucher québecois; (64) Traitements des semences; (65) Le Paratonnerre; (66) Comment et pourquoi produire des fraises; (67) Insectes Nuisibles aux Animaux de la ferme; (69) Ennemis des jardins et vergers; (70) La rotation expliquée; (71) Le paiement du lait et de la crème; (72) Nos Erablières; (73) Instruction aux élèves fermiers; (74) Engraissement de la volaille; (75) Chaux et calcaire pulvérisé; (77) Manuel de la Cuisinière; (78) Les Engines à gasoline. *Circulars:* (3) La Poule couveuse et les Poussins; (15) La Diarrhée chez les Poussins; (22) Concours d'Etables; (25) Culture du Maïs; (27) Calendrier d'Arrosage pour les Vergers; (28) Wheat Growing; (30) De la Culture de l'Orge; (31) De la Culture de l'Avoine; (32) De la Culture du Lin; (33) Pulvérisation pour les Vergers-Potagers; (35) Culture des Pois; (36) Culture des Haricots; (38) Calendrier général d'Arrosage; (39) Usage du Miel à la Maison; (41) Pommes de terre à la cuisine.

Roads.—Annual Report of the Minister of Roads; Loi concernant le département de la voirie.

Department of Colonization, Mines and Fisheries.—Minéralogie pratique à l'usage des Prospecteurs, par J. Obalski (1910); Fur Farming in the Province of Quebec, 1921; Mines and Minerals of the Province of Quebec, by Théo. C. Denis (1914); Iron ores of the Province of Quebec, by P. W. Dulieux (1915); Extracts from reports on the district of Ungava, by T. C. Denis (1915); Report on the Copper Deposits of the Eastern Townships, by J. Austen Bancroft (1916); L'industrie de l'amiante dans la province de Québec (1917); Guide du colon pour la région du Témiscamingue et de l'Abitibi, 1921; Guide du colon pour la région du Nord-Ouest de Montréal, et d'Ottawa, 1921; Guide du colon pour la région du Lac Saint-Jean, et de Chicoutimi, 1921; Guide du colon pour la région du Sud-Est de Québec, de Témiscouata à Gaspé, 1921; The Eastern Townships of Quebec, 1921; Report on Gold Deposits of lake Demontigny, by Ad. Mailhiot, 1922; Annual report on Mining Operations in the province of Quebec.

Department of Public Works and Labour.—Minister's Report.

Department of Public Instruction.—Code scolaire (1919); School Law (1920); Règlements du comité catholique (1922); Regulations of the Catholic Committee (1922); Regulations of the Protestant Committee (1921); Memoranda of Instructions to Teachers (1923); Annual Report; Financial statement of the Superintendent of Public Instruction (annual); Mon premier livre (1st and 2nd part) (1900), a fresh edition of which is printed every year; L'Enseignement primaire; Educational Record; yearly circulars containing instructions to school boards and school inspectors.

Legislative Assembly.—Agenda Paper of the Legislative Assembly; Votes and Proceedings of the Legislative Assembly; Journals of the Legislative Assembly; Sessional Papers, Departmental Reports and Returns to Orders and Addresses of the Legislative Assembly; Report of the Clerk of the Crown in Chancery on elections (published after every general election); Report of the Librarian of the Legislature; Annotated Rules and Standing Orders of the Legislative Assembly of Quebec; Private Bills in the Legislative Assembly of Quebec (a manual containing the rules relative to); Government and Legislature; List of the Chairmen and Members of the Committees of the Legislative Assembly.

ONTARIO.

Premier.—Report of the Hydro-Electric and Timiskaming and Northern Ontario Railway Commissions.

Provincial Secretary.—Annual Reports: Registrar General; Hospitals and Charitable Institutions; Hospitals for the Insane; Prisons and Reformatories; Institutions for the Feeble-minded and Epileptics; Neglected and Dependent Children. Digest of the Ontario Social Laws. Annual Report of the Secretary and Registrar of the Province of Ontario. Municipal Bulletin.

Treasury.—Annual Statements: Main, Supplementary and Further Supplementary Estimates of Expenditure; Public Accounts; Financial Statement of Treasurer delivered in the Legislative Assembly; Auditor's Report; Bureau of Archives Report; Statutes of the Province.

Attorney General.—Reports of Inspectors: Legal Offices; Registry Offices; Insurance; Division Courts. Annual Report of Board of License Commissioners and of the Commissioner of Provincial Police.

Registrar General.—Vital Statistics Act. Act respecting the Solemnization of Marriage. Physicians' Pocket Reference to the International List of Causes of Death. Annual Report of Births, Marriages and Deaths.

Department of Labour.—Report of the Labour Department, including Chief Factory Inspector, Chief Boiler Inspector, Chairman of the Stationary Engineers' Board, General Superintendent of the Ontario Offices of the Employment Service of Canada, and Interprovincial regulations regarding boiler construction and inspection.

Board of Health.—Public Health Act; Vaccination Act; Venereal Diseases Act Regulations. Annual Report. Facts about Flies, Mosquitoes, and How to Prevent them. "The Baby," monthly section in Public Health Journal. A simple Method of Water Purification. Rural and Semi-Urban Sanitation. Regulations: Control of Communicable Disease; Slaughter Houses, etc.; Prevention of Typhoid Fever; Anti-toxin, Vaccination, Smallpox, Measles, Typhoid Fever, Scarlet Fever, Diphtheria, Consumption (General), Venereal Diseases, Consumption (General Precautions), Consumption (Personal Precautions). Instructions on Disinfection. Leaflet containing Statistics respecting Waterworks and Sewage Systems. Regulations and Application Forms: Waterworks Approvals; Sewerage Approvals. Regulations: Prevention of Babies' Sore Eyes; Model Milk By-law; Anterior Poliomyelitis: Combating Lousiness among Soldiers and Civilians, 1918; Prevention of Cancer; Hints for Farm Workers.

Public Works.—Annual Report of the Minister with reports of the Architect, Engineer, Statements of Secretary, Law Clerk and Accountant. Report of the Queen Victoria Niagara Falls Park Commission.

Department of Public Highways.—Annual Report; Annual Proceedings Good Roads Association; (9) Report of the Ontario Highways Commission, 1914;

(10) Regulations respecting Township Road Superintendents, 1916; (11) Regulations respecting County Roads, 1920; (14) Township Road Improvement, 1918; (15) The Motor Vehicles Act, The Highway Travel Act, The Load of Vehicles Act, The Public Vehicles Act, 1922; (16) General Specifications for Concrete Highway Bridges, 1920; (17) General Specifications for Steel Highway Bridges, 1917; (18) Highway Bridges, 1917; (19) General Plans for Steel Highway Bridges, 1917; (20) Description of Road Models Exhibit, 1917; (21) Short Forms for Bridge Tenders, 1917; (22) Report on Street Improvement, 1917; (23) Bituminous Surfaces for Macadam Roads, 1917; (24) Specifications for Bituminous Materials, 1917; (25) Country Road Legislation, as enacted by the Highways Improvement Act, the Ontario Highways Act, and the Obstructions on Highways Removal Act, 1920; (27) Widening the Provincial Highway, 1919; (28) Main Road Legislation, 1919; (29) Regulations respecting Township Roads, 1920; (30) Township Road Legislation as enacted by the Ontario Highways Act, 1920; (31) Motor Vehicle Headlamps; (32) Report of Committee on Road Accounting; (33) The Provincial Highway Act, 1922; (34) The Planting and Care of Roadside Trees, 1923.

Department of Game and Fisheries.—Annual Report. Game Laws.

Lands and Forests.—Annual Report of the Minister. Preliminary Statistics of Mineral Production, issued annually, also bulletins of the Department of Mines which are later incorporated in the Annual Report. issued in several parts. Handbook of Northern Ontario on Colonization.

Agriculture.—*Annual Reports:* Minister of Agriculture; Agricultural College and Experimental Farm; Agricultural and Experimental Union; Live Stock Branch; Stallion Enrolment Board; Agricultural Statistics; Bee-Keepers' Association; Fruit Growers' Association; Vegetable Growers' Association; Entomological Society; Agricultural Societies; Horticultural Societies; Women's Institutes. *Bulletins:* (175) Farm Underdrainage Operations; (187) Codling Moth; (188) Weeds of Ontario; (194) Apple Orcharding; (198) Lime Sulphur Wash; (209) Farm Forestry; (210) Strawberries and Raspberries; (218) Birds of Ontario; (219) San Jose and Oyster Shell Scales; (220) Lightning Rods; (222) Currants and Gooseberries; (224) Greenhouse Construction; (226) Plum Culture in Ontario; (229) Smuts and Rusts; (231) Vegetable Growing; (232) Field Beans; (239) Potatoes; (240) Bacterial Diseases of Vegetables; (241) Peach Growing in Ontario; (242) Diseased Mouths a cause of Ill-Health; (243) Nature Study, or Stories in Agriculture; (244) Hints for Settlers in Northern Ontario; (249) The Pear in Ontario; (250) Insects affecting Fruit Trees; (251) Insects affecting Vegetables; (254) War Breads; (255) Tuberculosis of Fowls; (256) Wintering Bees; (257) Diseases of Fruit Trees; (259) Books on Agriculture; (260) Experiments with Farm Crops; (261) Wheat and Rye; (262) Sugar Beets; (263) Mushrooms; (264) Diseases of Digestive Organs of Horses and Cattle; (265) Bacteria; (266) Cheese-making and Butter-making; (267) Farm Water Supply; (268) Farm Crops; Experiments at O.A.C.; (269) Hay and Pasture Crops, Grasses, Clovers, etc.; (270) Judging Vegetables; (271) The Apple Maggot; (272) Contagious Abortion in Cattle; (276) Bee Diseases; (277) Motor Transportation in Rural Ontario; (279) Community Halls; (281) Better Bulls; (284) Milk Production Costs; (285) Flour and Breadmaking; (287) Silos and Silage; (288) Farm Management, Part V; (289) The Cabbage Maggot; (290) The Rural Literary and Debating Society; (291) The Production and Marketing of Ontario cheese; (292) Farm Poultry; (293) Feeding Young Live Stock; (294) Grafting Fruit Trees; (295) European Corn Borer; (296) Sweet Clover; (297) Colony Houses for Swine; special (without serial numbers) Debates and Plays; Co-operative Marketing. An average charge of 10 cents each for Bulletins and 15 cents each for Reports is made to persons living outside of Ontario.

Education.—Annual Report of the Minister of Education. Archaeological Report. School Acts, 75 cents cloth boards, 50 cents paper. Regulations and Courses of Study: Public and Separate Schools; Continuation Schools; High Schools and Collegiate Institutes; School Cadet Corps; General Announcement of Summer Courses; Text Book Regulations; Summer Model Schools for Training of Teachers; Autumn Model Schools for Training of Teachers; English-French Model Schools; Syllabus of Regulations and Normal School Courses for First

and Second Class and Kindergarten Primary Certificates; List of Teaching Days of High, Continuation, Public and Separate Schools; Recommendations and Regulations for Vocational Schools, etc. Recommendations and Regulations for Agriculture and Household Science Departments. Courses in History for Junior High School Entrance Examinations. Junior High School Entrance and Junior Public School Graduation Examination Instructions. Regulations *re* Validity of Teachers' Certificates; Special List of Schools; Announcement *re* The Carter Scholarships; The Penny Bank of the Schools of Ontario; The School Attendance Acts and the Recommendations and Regulations and the Part Time Courses; The Consolidation of Rural Schools.

MANITOBA.

Agriculture.—Annual Report. *Booklets:* Stock Raising in Manitoba; Opportunities in Manitoba; Meeting the Problems of Rural Life in Manitoba; Le Manitoba (French); Periodical Crop and Live Stock Reports; Map of the Province; Calendar of the Manitoba Agricultural College; Manitoba Agricultural Extension News (Monthly). *Bulletins:* Management of the Brood Mare and Foal; Canning by the Cold Pack Method; Common Diseases and Disorders of the Foal; Cheese Making on the Farm; Asparagus; Hatching, Brooding, Rearing and Feeding Chicks; Agricultural Society Activities; Farm Butter-making; Practical Cookery; Home Dressmaking; Observations on Rust Control; The Cream Separator on the Farm; Annual Pasture and Forage Crops for Manitoba; Rusts and Smuts of Grain Crops; Lessons in Millinery; Bee Keeping in Manitoba; Common Breeds of Poultry; Hand Selection and Harvesting of the Seed Plot; Rearing Dairy Calves; Birds in Relation to Agriculture; Laundering and Dyeing; Milk and Cream Testing on the Farm; The Manitoba Vegetable Garden; Clothing for the Family; Financing the Home; Colour and Design in Relation to Dress; Making Clothes Last Longer; Fattening, Killing, Dressing and Marketing Chickens; Debating Clubs; Silo Construction; Horses in Manitoba; Hay and Pasture Crops in Manitoba; The Farm Flock (Sheep). *Circulars:* The Farmers' Beef Ring; Barley Growing; Insect Poisons and Spray Mixtures; Blackleg—A Disease of Cattle; Summerfallow Competitions in Manitoba; Eggs from the Farm to the Consumer; How to Preserve Eggs; Cutworm Control; Back-Yard Poultry Keeping; Alfalfa Growing in Manitoba; Feeding for Winter Eggs; Potato Top Diseases in July and August; Standard for Judging Vegetables; The Western Wheat-Stem Sawfly; Chemistry of the Farm Water Supply.

Education.—Annual Report. Empire Day Booklet. Consolidation of Schools. Programme of Studies. Education among New Canadians. Municipal School Boards.

Mothers' Allowance Commission.—Annual Report.

Municipal Commissioner.—Statistical information respecting the Municipalities of the Province, with names and addresses of administrative and health officials of each municipality.

Public Works.—Annual Report, including reports on Public Institutions.

Attorney General.—Annual Report, included in Sessional Papers. Annual Reports: Public Utilities Commission; Good Roads Commission; Government Telephone Commission.

Provincial Treasurer.—Public Accounts; Estimates; Budget Speech; Report of the Commission to inquire into the operation of "The Rural Credits Act"; Auditor's Certificate, Balance sheets and Statement of Revenue Disbursements; Report of the Superintendent of Insurance and Fire Commissioner.

King's Printer.—Manitoba Gazette. Report on Library and Museum. Journals and Sessional Papers. Statutes of the Province. List of Incorporated and Licensed Companies operating in Manitoba.

Publicity Commissioner.—Mining and Mineral Prospects in Northern Manitoba; Annual Report of Commissioner of Northern Manitoba; Mineral Prospects of South Eastern Manitoba; Manitoba's Northland; Manitoba, the Keystone Province of the Canadian Confederation.

SASKATCHEWAN.

Agriculture.—Annual Report of the Department of Agriculture. Annual Reports of Branches, etc.: Dairy, Live Stock, Field Crops, Game, Statistics, Extension Department of College of Agriculture. Commission Reports: Elevator, Grain Markets, Agricultural Credit, Live Stock Marketing, Better Farming, Wheat Marketing. Bulletins and leaflets on Live Stock, Field Crops, Dairying, Farm Buildings, Tillage Methods, etc.

Other Publications.—Annual Reports: Department of the Attorney-General; Bureau of Labour and Industries; Department of Education; Department of Highways; Department of Municipal Affairs; Department of Provincial Secretary; Department of Public Works; Bureau of Public Health; Department of Telephones; Department of Railways; Local Government Board; Public Accounts. The Public Service Monthly.

ALBERTA.

Agriculture.—Farm Crops and Cultivation: Soil Cultivation; Seed, Preparation of Seed, Seeding; Suitable Varieties of Small Grains for Alberta; Winter Rye; The Production of Timothy Seed in Alberta; Potato Growing; Vegetable Gardening; The Storing of Roots; Weeds Poisonous to Live Stock; The Destruction of the Gopher; Live Stock and Poultry; Sheep in Alberta; Preparing for the Pig Crop; The Use of Pasture in Pig Raising; The Silo in Alberta; Successful Poultry Raising. Household Bulletins: Meat Curing on the Farm; A Talk about the Baby; Home Canning of Fruits, Vegetables and Meats; Home Drying of Fruits and Vegetables. Handbook of Alberta; Control of Grasshoppers in Alberta; The Housing of Swine; Calendar, Provincial Schools of Agriculture; Opportunities in Alberta; Conservation of Soil Fertility and Soil Fibre; Alberta Game Laws.

Department of Education.—Public School Course of Study; Public School Leaving Examinations; Elementary Agriculture and Gardening; High School Course of Studies; Courses in Art and Manual Arts, IX, X, XI; Course in Agriculture, Grade XI; Course in Music for High Schools; Course in Household Economics for High Schools; Summer School Announcement; Course of Studies and Examinations for Commercial Diplomas; Normal School Announcement; Night Class Instruction in Mining Centres; Technical Education in Mining Centres; School Buildings in Rural and Village School Districts; 50 Facts about Education in Alberta; Rural School Lunches; The Certification of Teachers in Alberta; Syllabus of Physical Training for Schools; Second Annual Announcement of the Provincial Institute of Technology and Art; Specifications for Teacher's Residence; Plans and Specifications (School Building Design " B "); Specification " B " (School Building Design); School Ordinance.

Department of the Attorney General.—Annual Report on Dependent and Delinquent Children.

Treasury Department.—Extracts from Public Accounts, 1920; Budget Speech, Provincial Treasurer, 1921; Financial and General Information Bulletin.

Department of Public Works.—Annual Report of Public Institutions; Annual Report of Public Works Department.

Department of Municipal Affairs.—Annual Report of Department; List of Alberta Municipalities.

Department of Public Health.—Annual Report of Department; Annual Report on Vital Statistics. Bulletins issued monthly on various Health Subjects. Pamphlets regarding Infectious Diseases—Diphtheria; Scarlet Fever; Measles; Whooping Cough; Smallpox, etc. (in different languages).

Annual Reports are also issued by the following departments and branches: Provincial Secretary, Railways and Telephones, Treasury (Insurance Branch), Public Accounts, Board of Public Utilities, Agriculture.

BRITISH COLUMBIA.

Department of Lands.—*General Bulletins*: (1) How to Pre-empt Land; (2) Some Questions and Answers regarding British Columbia; (3) British Columbia North of the C. P. Railway Belt; (4) Grazing Possibilities of British Columbia; (5) British Columbia South of the C. P. Railway Belt; (6) British Columbia Coast

(Lower Mainland); (7) British Columbia Coast, Toba Inlet to Queen Charlotte Sd.; (8) British Columbia Coast, Queen Charlotte Sd. to Millbank Sd.; (9) British Columbia Coast, Millbank Sd. to Portland Canal; (10) Crown Lands, purchase and lease; (11) Cariboo Land Recording Division; (14) Vancouver Island; (15) Queen Charlotte Islands; (16) Cranbrook and Fernie Land Recording Division; (17) Yale and Similkameen Land Recording Division; (18) Osoyoos Land Recording Division; (19) Nicola Land Recording Division; (20) Nelson and Slocan Land Recording Division; (21) Revelstoke and Golden Land Recording Division; (22) Tatla and Anahim Lakes; (23) Stikine and Atlin Land Recording Division; (24) Hazelton Land Recording Division; (25) Peace River—East of the Rocky Mountains; (26) Peace River—West of the Rocky Mountains; (27) New Westminster Land Recording Division; (28) François-Ootsa Lake; (29) Endako and Nechako Rivers; (30) Stuart and Babine Lakes; (31) Vicinity of the Pacific Great Eastern Railway (Squamish to Clinton); (32) Vicinity of the Pacific Great Eastern Railway (Clinton to 52nd Parallel); (33) Central Lillooet Division; (34) The Chicotin Plateau; (35) Fort George Land Recording Division, Central and Western Portions; (36) Fort George Land Recording Division, Fraser River (south fork) and Canoe River. *Forest Branch*: (1) Barns, Combination and general purpose (1919); (2) Barns, Dairy, Ice, and Milk Houses (1915); (3) Barns, Beef Cattle (1915); (4) Barns, Horse (1915); (5) Barns, Sheep (1915); (6) Piggeries and Smoke Houses (1919); (7) Poultry Houses (1919); (8) Granaries (1919); (8) Implement Sheds (1919); (9) Silos and Root Cellars (1915); (10) Farm Houses (1921); (12) How to Finish British Columbia Woods (1923); (21) Uses, Strengths, and Working Stresses of B.C. Timber (1920); (Q) What are your Needs? British Columbia Can Supply them; Woods to use; (T.S.) How to obtain a "Timber Sale." *Grazing Branch*: (1) Grazing Management of Crown Lands (1919); (2) Grazing Management of Crown Lands Range Allotment (1918); (3) Grazing Management of Crown Lands Co-operative (1919); (4) Grazing Possibilities of British Columbia (1920); (10) Regulations and Instructions for the Use of the Crown Ranges for Grazing Live Stock (1919); (12) Central British Columbia; Mount Robson Park; Mount Garibaldi Park; Strathcona Park.

Department of Mines.—Comprehensive Annual Reports obtainable on application to the Department of Mines.

Department of Agriculture.—*Reports and Miscellaneous*: (8) Agriculture in British Columbia; (26) Columbia-Kootenay Valley, (2nd edition); (27) Climate of British Columbia, (7th edition); (30) Guide to Bee-keeping; (65) Agricultural Statistics (1914); (76) Agricultural Statistics (1916); (88) Agricultural Statistics (1920); (83) Preservation of Food; Women's Institute Rules and Regulations; (85) Clearing Bush Lands; Farmers' Institute Rules and Regulations; (12) Proceedings of Entomological Society of British Columbia (1921); Agricultural Fairs Association Report (1918); Board of Horticulture Rules and Regulations (1919); Beekeepers' Calendar for British Columbia (1921); Farm Account Book; Agricultural Department Annual Reports, 1915, 1916, 1917, 1920 and 1921. List of Publications, Department of Agriculture; Agricultural Journal (Circulation 2,300. Published Monthly); Booklet on Aims and Objects of Farmers' Institutes; Leaflet, Order in Council *re* Bounties; Opportunities in B.C. (1923 Edition); Poultry Breeders' Directory (No. 11); Some Questions and Answers regarding British Columbia (Revised Edition for Settlers); Stock-breeders' Directory (No. X); *Bulletins*: *Live Stock and Mixed Farming.*—(60) Hog-raising in British Columbia; (64) Goat-raising in British Columbia; (66) Silos and Silage; (67) Feeding and Management of Dairy Cattle; (71) Butter-making on the Farm (2nd edition); (72) Milk-testing and Dairy Records; (73) Field Crop and Field Competition; (77) Sheep-raising; (78) Boys' and Girls' Competition, 1918; (79) Field-crop Competition, (1918); (80) Management of Market Rabbits (2nd edition); (86) The Potato in British Columbia; (87) Fertilizers; (90) Yields, Grades, Prices and Returns for Apple Varieties in the Okanagan Valley. *Poultry Raising, etc.*—(26) Practical Poultry-raising (6th edition); (39) Natural and Artificial Brooding and Incubating (3rd edition); (49) Market Poultry (3rd edition); (74) Breeding and Selection of Commercial Poultry; (63) Poultry-house Construction. *Circular Bulletins*: (1) Thousand-headed Kale (2nd edition); (13) Root-seed growing in British Columbia; (20) Seed-growers' Directory, 1917-18; (21) Silage aids Production; (22) Medical Inspection of Schools. *Agricultural Department Circulars*:

(14) Community Breeding (2nd edition); (29) Hints to Exhibitors at Fall Fairs; (33) Vancouver Island and Gulf Islands; (34) Agriculture in West Kootenay; (35) How to Pack Nursery-Stock, etc.; (36) Preliminary Report of forty-five Dairy Farms at Chilliwack, etc.; (37) Some Good Egg Recipes; (38) Cost of Producing Apples in Okanagan Valley; (39) Peat and Muck Soils. *Horticultural Circulars*: (6) Spray Calendar (Revised, 1923); (14) Practical Irrigation; (20) Orchard Cultivation and Cover-crops; (27) Methods of Fruit Picking and Handling; (33) Fruit-growing Possibilities, Skeena River; (48) Exhibiting Fruits and Vegetables (2nd edition). *New Horticultural Series*: (31) Peach-twig Borer; (32) Cabbage-root Maggot; (33) Strawberry-root Weevil; (34) The Woolly Aphid of the Apple; (35) Currant Gall-mite; (36) The Onion-thrips (3rd edition); (37) The Imported Cabbage-worm; (38) The Lesser Apple Worm (2nd edition); (39) Apple-asphides; (40) Soap Solutions for Spraying (2nd edition); (41) The Oyster-shell scale; (42) Top working of Fruit Trees, and Propagation; (43) Gardening on a City Lot; (44) Apple-scab; (45) Anthracnose; (46) Egg-plant and Pepper Growing in British Columbia Dry Belt; (48) Forcing Houses and Frames for producing Early Vegetable Plants; (50) Potato-diseases; (51) Orchard Cover-crops; (52) Diseases of Stone-fruits in British Columbia; (53) Selection of Orchard Sites and Soils; (54) Loganberry Culture; (55) Raspberry Culture; (56) Currant and Gooseberry Culture (2nd edition); (57) Blackberry Culture; (58) Strawberry Culture; (60) Pruning Fruit Trees; (61) Making Lime-Sulphur at Home (1920); (62) Planting Plans and Distances; (63) Locust control; (64) Varieties of Fruit recommended for Planting in B.C. *Poultry Circulars*: (2) Tuberculosis in Poultry; (4) Management of Turkeys (2nd edition); (11) Poultry-keeping on a City Lot (3rd edition); (12) Management of Geese; (15) Profitable Ducks; (19) Poultry Rations and their Practical Application (2nd edition); (25) Hatching Hints; (26) Soil-contamination; (27) Breeding Stock Hints. *Dairy Circulars:* (1) Starters for Farm Cheese-making; (2) Farm cheese; (3) Cottage cheese; (4) Clotted Cream; (5) Varying Butter fat Tests; (6) Care of Milk and Cream.

Note.—Copies of the publications listed will be sent free of charge on application to the Secretary, Department of Agriculture, Victoria, B.C.

YUKON TERRITORY.

Reports from the Gold Commissioner and from the Crown Timber and Land Agent are contained in the Annual Report of the Department of the Interior, Ottawa. Copies of mining regulations and mining laws relating to the Yukon Territory can be obtained on application to the Department of the Interior, Ottawa, or at the office of any mining recorder in the Yukon Territory.

V.—SELECT BIBLIOGRAPHY OF THE HISTORY OF CANADA.[1]

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[1]Contributed by Adam Shortt, C.M.G., LL.D., F.R.S.C., Chairman Historical Documents Publication Board, Public Archives, Ottawa.

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XV.—THE ANNUAL REGISTER, 1922-23.

I.—DOMINION LEGISLATION, 1922-23.

1922.

The following are the public Acts of the first session of the fourteenth Parliament of Canada, begun and holden at Ottawa, on March 8, 1922, and closed by prorogation on June 28, 1922.

Finance.—Three Appropriation Acts were passed during the session, cc. 1, 2 and 53. The total sum appropriated for the fiscal year 1923 was $318,183,520, and for 1922, $9,623,793. By c. 30, the Governor in Council is given authority to raise loans not exceeding in the whole $350,000,000 to meet maturing loans and obligations. The Special War Tax Revenue Act, 1915, is amended by c. 47. Taxes on cheques, bills, notes and express money orders are increased to a rate of 2c. on every $50. or fraction thereof, with a maximum of $2 on $5,000 or more. A receipt to be valid must bear a 2c. stamp. The Income Tax Act, 1917, is amended by c. 25. The normal rate is 4 p.c. on incomes of from $2,000 to $6,000 in the case of a married person or one having dependent upon him any of the following—a parent or grandparent, daughter or sister, or a son or brother under 21 years of age and physically or mentally incapable of self-support. For all other persons the normal tax is 4 p.c. on incomes of from $1,000 to $6,000. Chapter 15 sets down the year April 1 to March 31 as the fiscal year and the period for which all Government accounts are to be computed. Balances of appropriations unused at the end of the year are to lapse.

By c. 37, in the case of penny banks, where formerly 95 p.c. of all deposits had to be deposited in a Government or Post Office savings bank, an amount up to 50 p.c. of the deposits taken elsewhere than at the head office may now be placed in a chartered bank.

The Insurance Act, 1917, is amended by c. 28, as follows—life insurance companies transacting any other kind of business must keep separate the funds belonging to the two classes, and likewise with other companies transacting life insurance. The separate funds may be separately liquidated under the Winding-up Act. By c. 31, the Loan Companies Act, 1914, is amended by particularizing the securities a loan company may hold, upon what security it may lend and the proportion it must maintain of liquid assets to deposits. C. 51, specifies how and for what length of time a trust company may hold real estate, and how trust money may be invested when the nature of the investment has not been set down in the trust deeds.

Agriculture.—C. 14 provides for the constitution and powers of the Canada Wheat Board, to be established when two or more provinces pass the necessary legislation. The Governor in Council appoints its ten members, of whom three or more constitute the executive. Its powers are to buy wheat and to sell to foreign buyers whatever, in its estimation, is the surplus over the probable domestic consumption. The Dominion Government is not responsible for deficits. The surplus from operations is divided amongst the provinces who by their legislation have allowed the Board to act. C. 35 authorizes the manufacture and importation of oleomargarine until Aug. 31, 1922, and its sale until March 1, 1924. By c. 43 onions and potatoes must be graded and the grade is to appear on the bag or barrel, with the name of the seller. Root vegetables, if not sold with "greens" attached, are to be sold by weight. C. 32 provides that cans containing meat or fish are to be

labelled with the name of the packer or first dealer, the description of the contents and the minimum weight, and the same provisions are to apply to imported canned fish. By c. 5, agricultural fertilizers must be registered with the Minister prior to sale in Canada, and their composition must be shown on the wrapper or invoice. C. 7 reduces the compensation to the owner of animals slaughtered in accordance with the Animal Contagious Diseases Act.

Trade and Commerce.—By c. 18, the value for duty of goods from a country whose currency is depreciated is to be the same as that on similar goods from the United Kingdom. Under c. 19, the Governor in Council may order that goods imported be stamped with the name of the country of origin. Settlers' effects—machines, vehicles and agricultural implements—are to be admitted duty free if the settler brings them with him into the country, but if admitted under this clause, must not be sold in Canada within one year of their entrance. C. 27 provides that retail druggists who have been licensed by the Minister of Customs and Excise may use spirits testing more than 50 p.c. above proof in preparing medicines, but must pay an excise duty of from $2.40 to $2.43 per gallon and increasing in proportion to their percentage above proof.

By c. 8, the Bankruptcy Act is amended. The trustee is legally responsible for the verification of the debtor's statement. The trustee's plan for a composition of the debts is binding upon all the creditors if it has been approved by a majority of them holding two-thirds of the debts and sanctioned by the Court.

Currency.—By c. 17 the millesimal fineness of silver coins is changed from 4 to 6.

National Defence.—C. 34 charges the Minister of National Defence with all matters relating to defence, including the Militia and the Military, Naval and Air Services of Canada. C. 44 makes corresponding changes in the Salaries and the Senate and House of Commons Acts. The Air Board Act is amended by c. 6, which provides for compensation for death or injury suffered while flying in the public service of Canada.

Elections.—By c. 20, change of residence within two months of a general election is not to be taken as a disqualification from voting. The voter may cast his vote at the place where his name is listed. By c. 26, on the application of an Indian or of his band in his behalf, two officers of the Department of Indian Affairs and one member of the Indian's band are to decide upon his fitness for enfranchisement.

External Affairs.—C. 49 gives authority to the Governor in Council to do whatever is necessary toward carrying out the provisions of the treaties of peace with Hungary and Turkey.

Fisheries.—C. 23 makes it an offence to leave a Canadian port in order to fish for salmon or lobsters beyond territorial waters except under license from the Minister. C. 24 provides for license fees for salmon curing stations, and in British Columbia for herring dry-salting establishments.

Health.—C. 13 gives the Canadian Red Cross Society the powers of a corporation, but compels it to furnish an annual report to the Ministers of Health and of National Defence, subject to an audit by the latter Department. By the amendments to the Opium and Narcotic Drug Act under C. 36, no drugs falling under these classes are to be sold to any but practising physicians, dentists, veterinary surgeons, and druggists, and then only upon written order. No prescriptions are to be for any but medicinal uses and none are to be filled the second time. Convicted aliens are subject to deportation.

Justice.—C. 29 provides for the compulsory retirement of judges of the Supreme and Exchequer Courts and of any superior, admiralty or county court even before the retiring age, if the Governor in Council on report of the Minister of Justice finds a judge incapacitated for the performance of his duties. A judge so retired is to be given the annuity which he would have received if he had continued in his work until reaching the age limit. Under c. 48, there is an appeal to the Supreme Court from any provincial court which the provincial statutes have named the court of final resort in the province. C. 4 provides for deputy judges in admiralty. By c. 22, any action against the Crown arising out of escheat must be brought within 5 years of the time of escheat. C. 11 states the conditions of manufacture and export of spirituous liquor in any province. Search warrants are to be given on evidence of reasonable suspicion that the law is being broken. By c. 16, the penalties for stealing automobiles are increased. Railways are liable to an action for conveying cattle without proper nourishment and rest. C. 3 enacts that a convict in penitentiary having a contagious disease on the expiry of his term is to be kept in his former custody until the penitentiary surgeon testifies to his good health.

Dominion Lands.—Under c. 21, a lease of Dominion lands may be cancelled by the Minister of the Interior or by his agent for neglect to pay royalty or rent, or for a breach of the conditions set down at the time of granting.

Pensions.—Under c. 39, on the motion of the Civil Service Commission, civil servants unfit for further duty may be retired even if they are under 65 years of age.

Railways.—Under c. 41, the Crow's Nest Pass Agreement, in so far as it affects grain and flour, is again given force.

Returned Soldiers.—Under c. 42, if on the death of an insured man, a pension becomes payable to his dependants by any government other than the government of Canada, the present value of that pension is to be deducted from the benefits payable under the Returned Soldier's Insurance Act. C. 38 amends the Pension Act so that a pension may be continued to minor children on the death of the pensioner's wife. C. 45 gives the Department of Soldiers' Civil Re-establishment power to constitute medical boards, to grant free transportation, and to provide for the burial of those dying in destitution, subject to such appropriation as Parliament may vote. By c. 46, the Soldiers' Settlement Act, 1919, is amended by providing for the consolidation of interest and principal owed by settlers, on account of advances, the same to be payable in twenty-five or fewer annual instalments with exemption from interest for from two to four years. In default of the payment of any instalment that instalment is to bear interest until paid.

Shipping and Harbours.—By c. 10, the Governor in Council is authorized to make rules affecting all public ports not governed under Act of Parliament by a Harbour Commission. The Governor in Council, under c. 33, may advance to the Harbour Commissioners of Montreal sums up to $5,000,000 for the construction of terminal facilities, the plans for which must have the prior approval of the Minister of Marine and Fisheries. The corporation is to deposit with the Minister of Finance debentures to the amount of the loan and is to pay the loan by their redemption in 25 years. C. 40 makes similar provisions for the harbour of Quebec, except that in this case the maximum amount to be advanced is $1,500,000. C. 50 gives the Harbour Commissioners of Trenton powers to take dues on merchandise landed or put on board at their port, and to use surpluses for improvements in accordance with plans previously approved by the Minister of Marine and Fisheries.

C. 52 gives the Harbour Commissioners of Vancouver power to appoint and pay a harbour master and his deputies. By c. 9 the number of exemptions from payment of pilotage dues is increased.

Miscellaneous.—By c. 12, where the funds of the Canadian Patriotic Fund are not sufficient to carry on its work, and where the cessation of this work would put additional burdens on a municipality or province, the Governor in Council may authorize payments to the Canadian Patriotic Fund from the Consolidated Revenue Fund.

1923.

The following are the Public Acts of the Second Session of the 14th Parliament of Canada, begun and holden at Ottawa on Jan. 31, 1923, and closed by prorogation on June 30, 1923.

Finance.—Three Appropriation Acts were passed during the year, cc. 1, 2 and 73. A total sum of $288,153,681 was voted for the fiscal year 1924, while $18,202,106 was voted for the year 1923. C. 32, amending the Bank Act, is summarized on page 817. By c. 34, amending the Business Profits War Tax Act, the limit to the period for which a person is liable for unpaid taxes is removed. C. 48, to supplement the Finance Act, authorizes the Minister of Finance to advance Dominion notes to banks on pledge of securities valued by trustees of the Central Gold Reserves, these advances to be repayable in Dominion notes. C. 52 amends the Income War Tax Act regarding amounts of income taxable. The Exchequer Court is given sole jurisdiction to determine all questions arising out of assessments. C. 55, amending the Insurance Act, provides detailed regulations regarding insurance on automobiles. By c. 66, the charters of the Caisse d'Economie de Notre Dame de Quebec and of the Montreal City and District Savings Bank are extended until July 1, 1933. C. 70 amends the Special War Revenue Act, particularly regarding taxes on cheques and money orders, taxes on wines, sales taxes and manufacturers' and jobbers' licenses.

Agriculture.—C. 3 amends the Animal Contagious Diseases Act, reducing the compensation paid to owners of pure-bred cattle from $200 to $150. C. 15 regulates the sale and inspection of fruit and fruit containers in respect to grades, marks, packing and repacking, branding, inspection and penalties for infringements. By c. 18, consolidating the Acts respecting live stock, standard stockyard regulations are authorized, with provisions for inspection and enforcement. The testing, inspection and sale of seeds are regulated by c. 27, under which grades, marks, and zones of production are to be standardized by an advisory board appointed for the purpose. The Dairy Industry Act is amended by c. 43, in which percentages of fat in milk, cream and butter are fixed. Penalties for non-compliance are increased. The Feeding Stuffs Act is amended by c. 47. The Minister may prohibit further importation of adulterated feeding stuffs or those below established standards.

Trade and Commerce.—The Convention of Commerce between Canada and France is given in c. 14, by which the customs duties of the "Intermediate Tariff" of 1907 are extended to France and her dependencies. The same rates apply to the United Kingdom as long as France continues to enjoy them and likewise to British Colonies which grant to Canada as favourable treatment as they give to any foreign country. A similar convention with Italy is given in c. 17, permitting the importation of goods, the produce or manufacture of Italy, on the most favourable terms granted to any foreign power. C. 42 amends the Customs

Tariff of 1907 with respect to discounts granted on goods shipped under the terms of the British Preferential Tariff, with provisions and exceptions. Also it provides for tariff negotiations between United States and Canada, with a view to reciprocal reductions on certain articles. C. 46, amending the Export Act, provides for prohibition, by special regulation, of the export of pulpwood.

Fisheries.—C. 33 amends the Biological Board Act regarding the constitution of the Board, while c. 61 forbids halibut fishing in territorial or prohibited waters in close season, with port regulations and penalties for vessels violating such regulations.

Railways and Highways.—C. 4 extends the time allotted to the provinces by the Canada Highways Act for a further period of two years. Cc. 6 and 7 deal with the Canadian National Railways, the latter permitting the company to carry on an express business, while c. 37 amends the Canadian National Railways Act with respect to the issue of securities.

Shipping and Harbours.—C. 29 authorizes the issue to the Vancouver Harbour Commissioners of sums up to $5,000,000, with provisions for applications for advances and payment of interest. C. 35 amends sections of the Canada Shipping Act dealing with registration, shipwrecks, inspection, loading and calculation of tonnage. C. 45 provides for subsidies during construction of first and second-class dry docks. C. 49 requires the filing of rates and rate changes by shipping companies or shipowners with the Board of Grain Commissioners, and prohibits soliciting and collecting of insurance premiums by owners or their agents. C. 59 provides for advances to the Harbour Commissioners of Montreal, while c. 71 authorizes the appointment and establishment of the Three Rivers Harbour Commission.

Interior.—C. 12 prohibits the disposal of certain coal mining rights in Alberta without statutory authority. C. 13 amends the Dominion Forest Reserves and Parks Act with respect to its appended schedule. C. 44 amends the Dominion Lands Act as to transfer of title of homesteads, school lands, timber rights, etc.

Health.—C. 22 prohibits the improper use of opium and other drugs, prescribing license regulations and penalties for infringements.

Returned Soldiers and Pensions.—C. 20 provides for the continuation of payment of pensions of retired officers who are employed in the public service. Any payments to such officers are not recoverable. C. 58 amends the Militia Pensions Act, changing the period of service entitling officers and militiamen to pension from 20 to 10 years. C. 62 amends the Pension Act regarding disabilities, effect of insurance benefits, jurisdiction of Board of Pension Commissioners, and appointment of Federal Appeal Board. C. 67 amends the Returned Soldiers' Insurance Act, and c. 69 the Department of Soldiers' Civil Re-establishment Act regarding medical and appeal boards and tribunals.

Justice.—C. 19 provides that "a marriage is not invalid merely because the man is a brother of a deceased husband of the woman or is a son of such brother." C. 21 provides for the enforcement of the powers and decisions of stipendiaries in the Northwest Territories. C. 31 amends the Bankruptcy Act with regard to details of assignments, proceedings of debtor and trustees and security furnished by trustees, sale of hypothecated property, creditors' meetings and examinations by the Official Receiver. C. 41 amends the Criminal Code, principally with respect to appeals from convictions. C. 56 amends the Judges Act with regard to salaries of judges of the Supreme Court of Ontario and the Circuit Court of Montreal.

Mines.—C. 40 provides for the payment of bounties on Canadian-produced copper bars or rods sold in Canada for consumption, c. 63 for bounties on Canadian petroleum attaining specified standards, while c. 64 amends the Petroleum and Naphtha Inspection Act.

Immigration.—C. 38, the Chinese Immigration Act, 1923, restricts the entry to or landing in Canada of persons of Chinese origin, with the exception of government representatives, Chinese children born in Canada, merchants (defined by what regulations the Minister may prescribe) and students. It also sets out regulations for ships bringing Chinese to Canada and their procedure at ports of entry. C. 51 amends the Immigration Act with respect to deportation and the crews of ships arriving in Canada. Enemy aliens are no longer prohibited from entering the country.

Copyrights, Patents and Trade Marks.—C. 10 amends the Copyright Act, 1921. C. 23 consolidates the Acts relating to Patents of Invention, establishes a Patent Office in charge of a Commissioner of Patents, and deals with applications, their refusal, duration, re-issue, disclaimers, assignments, legal proceedings, caveats, restoration and patent fees. C. 28 amends the Trade Mark and Design Act with respect to applications already filed in another country.

Miscellaneous.—C. 68 amends the Senate and House of Commons Act with regard to sessional indemnities and allowances. C. 9, the Combines Investigation Act, 1923, provides for the appointment of a "Registrar of the Combines Investigation Act" who shall hear applications for investigations into the formation of combines. Subsequent actions with penalties for infringements are provided. C. 39 amends the Companies Act with regard to mining companies, allowing payment of dividends from funds derived from operations, although net assets are thereby reduced below par value of issued capital stock, provided notice has been given. C. 53 reduces the duty on cigarettes from $7.50 to $6.00 per thousand from May 12, 1923, and removes the excise duty on sugar made from sugar beets.

II.—PROVINCIAL LEGISLATION, 1922.

Prince Edward Island.

Administration of Justice.—C. 6 provides that the Supreme Court of the province is to be composed of four judges. Their powers and precedence, with regulations and duties, are appended. C. 7 amends the Common Law Procedure Act regarding docketing of cases, c. 8 the County Courts Amendment Act regarding its powers and status, and c. 9 the Statute Law *re* the tax on lobster cases.

Child Welfare.—C. 14 amends the Act for the Protection of Neglected and Dependent Children, setting the age limit at 18 years and designating the court officials having jurisdiction under the Act.

Elections.—C. 4 makes slight amendments to the Election Act, 1913, while c. 5, the Election Act, 1922, deals generally with the constitution of the legislature of the province, qualification of members, resignation, electoral districts, qualifications of electors and general procedure at elections.

Finance.—C. 16 provides for an expenditure of $698,482 for the fiscal year ended Dec. 31, 1922, and provides at the same time for necessary disbursements during the year 1923.

Labour, Health and Social Legislation.—C. 10 amends the Prohibition Act, setting out regulations regarding export liquor warehouses, their operation and inspection. C. 13 provides for the incorporation of the Optometrical Association

and the practice of optometry in the province. C. 15, the Registered Nurses Act, establishes the Registered Nurses Association, provides for the keeping by the Provincial Secretary of a register of all duly qualified nurses and for their training, examination and certification.

Highways.—C. 2 increases the amount of loan and debenture issues provided for in the Act to Promote the Improvement of Highways. C. 3 amends the Road Act, reducing the poll tax and the rate of pay per day provided therein.

Motor Vehicles.—C. 1, the Motor Vehicle Act, sets out detailed provisions with respect to the sale, registration and operation of motor vehicles, speed limits, fees and taxes, and penalties for infringement of traffic and highway regulations.

Nova Scotia.

Administration of Justice.—Chapters 5, 13, 16 and 17 legalize jury panels, assessment rolls and revisers' lists for 1922, amend the Act respecting court houses, jails and lockups and the Probate Act, both as regards the appointment of an additional deputy registrar and the eligibility of women for such office.

Agriculture.—C. 23 provides for the encouragement of agriculture throughout the province by way of financial aid to exhibitions held by municipalities and agricultural societies.

Assessment.—C. 34 amends the Assessment Act, fixing a poll tax of 30 cents per head on all persons between the ages of 18 and 60. Revenues from this source are for the support of the poor. Further slight amendments are made in chapters 35 and 36.

Child Welfare.—C. 28 amends the Children's Protection Act regarding aid by municipalities and the receipt by Children's Aid Societies of all sums paid for the support of children. C. 29 further amends the Act with respect to the care and expense incurred in the maintenance of children whose place of settlement cannot be determined.

Companies.—C. 3, an Act respecting Trust Companies, deals with the incorporation, objects, internal regulation, by-laws, capitalization, ownership, meetings, powers and inspection of such companies. C. 4 deals similarly with Loan Companies. C. 48 amends the Nova Scotia Companies Act with respect to powers of incorporated companies and the incorporation of companies for the promotion of art, science, religion or education, and the exemption of such companies from payment of customary fees. C. 124 incorporates certain branches of the Maritime United Farmers Co-operative, Ltd.

Education.—C. 39 amends the Education Act by providing that before Sept. 1 of each year the trustees in every school section shall ascertain the names and ages of all children between four and eighteen, entering them in a book of record. No children are allowed to be employed in any business or trade during school hours unless they hold certificates from school principals attesting to specified proficiency at regular examinations. Penalties for non-compliance are stipulated.

Elections.—C. 20 amends the Nova Scotia Elections Act in its first appended schedule, while c. 32 amends the Franchise Act regarding qualifications of electors, appeals from decisions regarding revision of voters' lists, and procedure of investigating courts.

Finance.—C. 1 authorizes the raising of $425,000 by a loan on the credit of the province; the proceeds to be used for the retirement of provincial debentures. C. 50, the Appropriation Act, provides several sums of money to defray charges and expenses of the public service for the fiscal year 1922.

Game.—C. 45 amends the Forests and Game Act, with regard to fines and disposition thereof, open and close seasons, stray dogs, shooting of grouse and partridge, licenses to non-residents, other licenses, export of hides, use of fire-arms and trade in fur products.

Highways.—C. 14 amends the Roads Act, changing the rule of the road from "Keep to the left" to "Keep to the right."

Labour, Health and Social Legislation.—C. 21 incorporates the Graduate Nurses Association and includes provisions for the training, examination and certification of nurses. C. 26 amends the Workmen's Compensation Act with regard to persons affected, definitions of accidents, compensation to widows, accidents to children, compensation paid by executors or administrators of estates and classes of employers under the jurisdiction of the Act. C. 37 amends the Health Act regarding duties of sanitary inspectors in municipalities, regulations *re* vaccination of school children and the keeping of wild animals for breeding and other purposes. C. 38 amends the Temperance Act, providing for the appointment of vendors who shall sell liquors for prescribed purposes.

Municipalities.—C. 2 authorizes the raising of money on loans for the purpose of buying cattle feed and seed grain required for the respective polling districts. The Lieutenant-Governor in Council is authorized to guarantee the principal and interest of such loans, which are not in any case to exceed $20,000. C. 33 amends the Municipal Act, stipulating limits to loans by municipalities.

New Brunswick.

Administration of Justice.—C. 13 amends the Judicature Act regarding the appointment of guardians for infants by a court or judge on petition.

Agriculture.—C. 34 provides for the incorporation of associations for the co-operative marketing of farm products, with regulations *re* ownership, capitalization and internal organization.

Companies.—C. 25 amends the Companies Act, providing for the holding of real and personal property by companies incorporated for charitable, educational or other like purposes. Provision is also made for the incorporation of such companies without capital stock.

Education.—C. 5 amends and consolidates the Acts respecting schools, regarding boards of education and their duties, school districts, inspectors, raising of finances and their disposal, meetings of trustees, salaries of teachers and general regulations regarding school organization and administration. C. 27 provides for the payment of pensions to school teachers, setting out qualifications and amounts, with the administration of the Teachers' Pension Fund from which these amounts are paid.

Elections.—C. 9 amends the Act regarding electoral districts, setting out the boundaries and location of new sub-districts in several counties.

Finance.—C. 1 provides certain sums of money to defray expenses of government for the year ended Oct. 31, 1922. C. 20 authorizes the issue of debentures to the sum of $1,000,000 to redeem debentures payable. The issue is under the provisions of the Provincial Loan Act. C. 23 authorizes a further similar issue of $800,000.

Forestry.—C. 29 amends the Forest Fires Act respecting fire protection and forest service, the duties of fire wardens and rangers and compulsory service in case of serious fires. C. 30 provides for the examination and licensing of scalers in the province, the appointment of a board of examiners, qualifications of candidates, and the duties of persons granted licenses.

Game.—C. 11 permits the issue of special licenses to residents and non-residents, allowing the shooting of moose and deer between specified dates.

Highways.—C. 2 provides for the repair and improvement of roads and bridges and other public works and services, giving detailed items of necessary expenditure with provisions as to tenders and contracts.

Labour, Health and Social Legislation.—C. 3, the Liquor Exporters Taxation Act, sets out regulations regarding the licensing of the storage and export of spirituous and malt liquors, etc., with taxes stipulated and penalties for non-compliance. C. 4 amends the Public Health Act regarding the appointment of boards of health and medical health officers in health districts and sub-districts. C. 10 amends the Workmen's Compensation Act with respect to limits of jurisdiction and compensation to dependent children. C. 18 legalizes the establishment of women's institutes in the province, together with the objects, organization and procedure of such institutes.

Motor Vehicles.—C. 16 provides for the regulation of bus lines and taxi systems, traffic regulations in municipalities and their enforcement.

Municipalities.—C. 8 amends the Fire Prevention Act regarding salaries paid to fire marshals and assistants, appointment of assistants and the adjusting of fire insurance claims. C. 24 requires the establishment of sinking funds by all municipalities on the issue of debentures. C. 26 permits the incorporation of villages where the population is less than 300 for the purpose of local improvements.

Public Utilities.—C. 17 provides for the incorporation of the St. John and Quebec Railway Trust Company to become a trustee under a mortgage effected between the St. John and Quebec Railway Company and the Prudential Trust Company, Ltd., with regulations as to its composition and procedure. C. 21 amends the New Brunswick Electric Power Act, principally regarding expropriation proceedings and compensation.

Taxation.—C. 7 amends the Acts respecting Rates and Taxes *re* duties of assessors, collection of taxes, default of payments, warrants, sale of lands for unpaid taxes and form of warrants.

Quebec.

Administration of Justice.—C. 27 amends the Quebec License Act regarding the operation of race meetings; c. 81 relates to *habeas corpus* procedure and c. 78 to the jurisdiction of Magistrates' Courts, c. 76 to the provisions respecting commissioners of the Superior Court, whereby members of the bar, notaries and justices of the peace may act as commissioners, and c. 79 to exemptions from seizure.

Colonization.—C. 3 provides for the expenditure of from $5,000,000 to $7,000,000 to aid colonization in the province.

Education.—C. 56, the Agricultural and Industrial Schools Act, deals with the treatment of delinquent minors, which is to be in the above schools rather than in reformatories. The Act applies only to males under 18 years of age. The Provincial Museums Act, c. 3, provides for the establishment of museums in Quebec and Montreal. C. 4 provides for an increase of ten in the number of students sent to Europe to study at foreign universities. C. 5 provides for an increase of from $3,000 to $5,000 in the annual grant to the Academy of Music. C. 41 establishes the practice of voting by ballot in the election of commissioners and trustees in certain school municipalities.

Elections.—C. 13 sets out the boundaries of the electoral districts of the province and re-drafts, with a few changes, those situated in the island of Montreal.

Five new districts are created—Montreal-Verdun, Montreal-Mercier, Abitibi, Papineau and Matapedia.

Finance.—C. 1 provides for an expenditure of $1,860,823 for the year ended June 30, 1923, and for $9,990,375 for the fiscal year 1924.

Fisheries.—C. 36 creates the Maritime Fisheries Bureau and provides for the training of students in fishing methods, the building and maintenance of cold storage plants and fish canning. It provides also for the establishment of fishermen's co-operative associations.

Forestry.—C. 31 provides for instruction in paper making and forest research and for the establishment of schools for the purpose. A grant is made to Laval University to aid in the maintenance of a school of instruction in forestry and surveying.

Highways.—C. 34 increases the loans authorized for roadwork to $40,000,000. Any balance of revenues received from the administration of the law respecting motor vehicles is to be applied under the Road Act. The province assumes full charge and expense of maintenance of provincial and regional highways as defined in the Act. C. 30 amends the Motor Vehicles Act with respect to weight, speed, equipment and registration.

Labour, Health and Social Legislation.—C. 61, the Quebec Narcotic Act, requires that a license to sell narcotics be held by all except certain specified persons and provides penalties for breaches of regulations, both by licensed persons and others who need not be licensed. C. 23 provides for the establishment of census boards to take a census of the province or any parts of it. C. 38 provides for the creation of a commission to enquire into labour conditions in the province and especially with regard to compensation in cases of accident. C. 68 amends the Workmen's Compensation Act, increasing the maximum compensation allowable from $2,500 to $3,000. C. 63 increases the penalties for the illegal practice of medicine and false representations by advertisement. C. 24 amends the Alcoholic Liquor Act, permitting the keeping of alcoholic liquor in clubs by members and the sale of beer by the glass in certain cases without a meal. The Medicinal Wines Act, c. 26, brings under provincial control certain products containing alcoholic liquor and permits their sale only by specified persons. C. 39 establishes a Fuel and Foodstuffs Control Bureau to protect the public in times of serious shortage and assure adequate measures of control.

Mining.—The Quebec Mining Law is amended by c. 35 with regard to the staking of claims and the transmission of plans of underground mining operations.

Municipalities.—C. 65, the Cities and Towns Act, gives particular attention to borrowing operations with a view to preventing abuses, and to protect such municipalities and the persons contracting loans with them.

Public Utilities.—C. 52 extends the jurisdiction of the Public Service Commission to expropriations under the Road Act and the Cities and Towns Act. It provides also that the chief district magistrate shall be *ex officio* a substitute member of the Commission.

Ontario.

Administration of Justice.—The Surrogate Court Act (c. 44) provides for the cancellation of the bond of an administrator in the distribution of an estate. Slight amendments are also made to the Judicature Act, the General Sessions Act and the Division Courts Act in chapters 42, 43 and 45, while c. 46 provides that jurors shall be summoned twenty days before their attendance is required. The Constables and Coroners Acts are also amended.

Agriculture.—C. 5 incorporates the Ontario Co-operative Dairy Products, Ltd., to deal generally in milk products and to provide co-operative marketing facilities for farmers and factories of the province; c. 90 provides for financial assistance to co-operative organizations engaged in the grading, packing and sale of fruit.

Companies.—C. 64 provides for the incorporation of co-operative credit societies, legalizing and stabilizing institutions of the type already in existence.

Education.—C. 98 amends the school laws with regard to the apportionment of public and separate school grants, school boundaries, union schools, rates, non-resident pupils, consolidated schools, superannuation of teachers and expenses in connection with indigent pupils. C. 99 amends the Separate Schools Act with regard to number of trustees and their retirement.

Elections.—C. 3 disqualifies for 10 years persons guilty of treasonable and seditious offences and military defaulters from voting. This may be removed by a county judge on application. C. 4, the Ontario Voters' List Act, consolidates previous Acts. C. 5 extends to the wife or husband of the person rated for land as owner or tenant the right to vote at municipal elections, while c. 73 extends the right to vote at advance polls to postal and express clerks.

Finance.—The sum of $23,248,489 was voted for the year ending Oct. 31, 1922, and $30,135,175 for the fiscal year ending Oct. 31, 1923.

Game and Fisheries.—C. 97 amends the Game and Fisheries Act in respect to duration of open seasons and licenses to trappers and fishermen.

Highways.—Chapters 26 and 27 amend the Highway Improvement Act regarding expropriation of land and methods of payment for highway construction. Chapters 80, 81 and 82 amend the Motor Vehicles Act with respect to registration numbers, lights and traffic regulations, the Load of Vehicles Act and the Obstruction on Highways Removal Act.

Insurance.—C. 61 amends the Ontario Insurance Act with regard to statutory conditions to be included in accident and sickness insurance policies and also in automobile policies, licenses to agents, brokers and adjusters, boards of enquiry in cases of disputes *re* issue of licenses, records to be kept, underwriters' agencies and the valuation of life insurance contracts. C. 62 provides for the organization and licensing of reciprocal or inter-insurance changes.

Labour, Health and Social Legislation.—C. 91 empowers the Minimum Wage Board to establish minimum and maximum hours of labour, with penalties for contravention. C. 56 amends the Workmen's Compensation Act. C. 93 provides for twenty-four consecutive hours rest in every week being granted by certain employers of labour. C. 59 provides for the incorporation of "The Association of Professional Engineers of the Province of Ontario." C. 92 amends the Children's Protection Act with regard to shelters and industrial schools, employment, and maintenance of Children's Aid Societies. C. 57 provides for the maintenance of deserted wives and children.

Mining.—C. 22 amends the Ontario Mining Act with respect to recorders and recorders' books, licenses, staking of claims, leases and default of owners or lessees. C. 23 establishes a commission to oversee the production and distribution of natural gas and prescribes regulations regarding rates.

Municipalities.—C. 71, the Municipal Amendment Act, 1922, makes provision for new regulations regarding annual nominations and elections, issue of securities, expropriation and compensation and bonuses to manufacturing industries.

Public Utilities.—C. 69 amends the Municipal Electric Railways Act. Certain sections of the Hydro-Electric Railway Act, 1914, respecting certain railway lines,

are kept in force. New provisions are made regarding payment of construction costs and the sale of securities. The county of York is authorized to purchase several electric railway systems. The Ontario Telephone Act (c. 70) is amended with regard to special rates on lands of subscribers to a system.

Taxation.—C. 12 amends the Corporations Tax Act regarding telephone companies and taxes on bets at race meetings.

Timber.—C. 18 empowers the Minister to confirm, vary or cancel any timber-cutting privileges, and to set time limits for cutting and removal.

Manitoba.

Administration of Justice.—C. 3 amends the Distress Act, stipulating certain chattels as being exempt from seizure under any landlord's warrant of distress. C. 13 amends the Jury Act, reducing the number on a grand jury from 18 to 12 and requiring petit jurors ordinarily to attend one day later than the grand jury.

Agriculture.—C. 8 amends the Farm Loans Act regarding retirement of shares and the raising of capital.

Assessment.—C. 28 amends the Assessment Act *re* the assignment of tax sale certificates by municipalities. C. 29 further amends the Act regarding validation.

Child Welfare.—C. 2, an Act respecting the Welfare of Children, establishes the Department of Public Welfare in charge of a Director and provides detailed regulations covering the procedure followed in juvenile courts, the apprehension of neglected children, their examination, children whose parents have not been legally married, feeble minded and mentally defective children, immigrant children, adoption, and child welfare organizations in municipalities and districts in the province.

Education.—C. 15 amends the Public Schools Act respecting boundaries of school districts, taxes and tax collection, union schools, authority of trustees and their nomination and election.

Elections.—C. 6, amending the Election Act, provides that elections shall be held ten days after nominations.

Finance.—In c. 21 provision is made for the borrowing of $500,000 under the provisions of the Provincial Loans Act, such sums to be used in capital expenditures. A further loan of $957,500 is authorized by c. 22. C. 23 authorizes the expenditure of $8,451,893 to defray the expenses of civil government from Dec. 1, 1921 to Aug. 31, 1922, and of sums up to $5,000,000 for the fiscal year ending Aug. 31, 1923. C. 24 makes further provision for the expenditure of $365,800 to defray expenses incurred during the fiscal year 1922.

Highways.—C. 10 makes slight amendments to the Good Roads Act with respect to the dating of debentures and their issue in instalments.

Labour, Health and Social Legislation.—C. 7 amends the Fair Wage Act regarding contents of notice for hearing complaints and c. 11 amends the Hospital Aid Act, establishing a lien on lands of any beneficiary receiving relief and the discharge of such liens.

Municipalities.—C. 9 empowers municipalities to assist farmers in the purchase of fodder, and to borrow money up to $50,000 by notes or debentures up to this amount. These may be guaranteed by the province. It sets out also the ways in which such sums may be expended and the supervision of the municipal commissioner over all such operations. C. 19 enacts similar regulations with regard to the borrowing of money for seed grain purposes, the total amount permitted being $60,000.

Taxation.—In c. 20, provisions for the relief of soldiers' property from taxation are effected, with classes of persons and property defined, applications, and the duration of benefits given.

Saskatchewan.

Administration of Justice.—C. 23 amends the Surrogate Courts Act regarding the distribution of assets and valuation of securities; c. 24 deals with the jurisdiction of the Exchequer Court of Canada and the authority of judges of the Dominion courts as to the use of court houses, etc.; c. 27 amends the Coroner's Act regarding inquests and c. 28, amending the Saskatchewan Provincial Police Act, provides that the Attorney General may order a special inquiry to be made respecting the commission of any of the offences mentioned in this Act by any member of the force.

Agriculture.—C. 42 amends the Municipalities Seed Grain Act, providing for the renewal of lien agreements; c. 52 amends the Agricultural Co-operative Associations Act regarding incorporated associations operating on the co-operative plan; c. 57, amending the Egg Marketing Act, sets out the restrictions on the purchasing, selling and candling of eggs and c. 87 outlines the conditions under which a grain grower may procure an advance for seed grain.

C. 2 defines the powers of the Canadian Wheat Board in the regulation and administration of the grain trade and the immunity of members as such from legal action.[1] C. 3 provides for the licensing of grain dealers in the province on application, the revocation of such licenses and the penalties imposed on persons carrying on specified operations without being duly licensed.[1]

Assessment.—C. 45 provides for the establishment of a permanent assessment commission and gives the duties and powers of its officers.

Child Welfare.—C. 15 sets out provisions for the establishment of a Bureau of Child Protection and c. 74 amends the Children's Protective Act regarding the incorporation of Children's Aid Societies.

Companies.—C. 35 amends the Benevolent Societies Act regarding incorporation, service of documents and change of address of benevolent societies.

Education.—C. 46 amends the Secondary Education Act regarding the annual meeting of taxpayers; c. 47, amending the School Act, states that tenders must be called for in case of capital expenditure in excess of $1,000, and c. 49 amends the School Assessment Act regarding the powers and remuneration of the Adjustment Board of the Saskatchewan Assessment Commission.

Finance.—C. 1 authorizes the expenditure of $2,205,270 to defray expenses of government for the fiscal year ending April 30, 1922, and of $19,295,219 for the fiscal year 1923 from and out of the consolidated fund. In addition a further sum of $2,200,000 is authorized to be paid from the telephone revenue.

Game.—C. 58 amends the Game Act regarding the length of the hunting season, protection of beaver and the amounts of licenses. Royalties must be paid to the Department of Agriculture upon all raw or undressed skins of fur-bearing animals specified in schedule C of the Act. Special permits must be obtained from the department in order to ship furs out of the province.

Highways.—C. 12, amending the Highways Act, sets out the conditions regarding the filing of plans for a public improvement. C. 71 amends the Vehicles Act regarding the loss or destruction and renewal of motor license plates.

Insurance.—C. 41 amends the Municipal Hail Insurance Act regarding the rates for hail insurance.

[1]These Acts were passed at the second session of the fifth legislature of the province. All other Acts quoted were passed at the first session.

Labour, Health and Social Legislation.—C. 59 amends the Medical Profession Act regarding investigations; c. 62 provides for registration of marriage settlement contracts. C. 73 sets out conditions under which monthly payments may be made to the mothers of dependent children; c. 75 deals with the care and treatment of mentally diseased persons, and c. 76 contains further amendments to the Saskatchewan Temperance Act.

Miscellaneous.—C. 14 provides for the establishment of a bureau, to be called the Bureau of Publications, to take charge of travelling libraries and the preparation and procuring of motion pictures, etc. C. 54 amends the Stray Animals Act and deals with the licensing of herders and auctioning of stray animals. C. 67, respecting the Lightning Rod Act, regulates the sale and installation of lightning rods and c. 83 provides for warehousemen's liens.

Municipalities.—C. 7, amending the Municipalities Relief Act, provides for relief to be given to settlers affected by the recent severe drought and consequent crop failure. C. 13 grants special powers to the Local Government Board. C. 17, amending the Public Revenues Act, provides for municipalities to deposit moneys collected in respect of the public revenues in an account to be called "The Provincial Treasurer's Trust Account" and c. 36, amending the Town Act, deals with burial of destitute persons and the collection of amusement tax. C. 37, amending the Village Act, authorizes the granting of aid to soldier's memorials, provided the grant does not exceed $300.

Taxation.—C. 20 amends the Wild Lands Tax Act regarding payment of taxes collected under this Act, while c. 43 amends the Arrears of Taxes Act regarding advertising of lands placed on sale.

Alberta.

Agriculture.—C. 58 provides for the licensing of produce merchants and the regulation of their activities by the Minister of Agriculture. C. 67 enacts provisions for the extermination of agricultural pests. C. 68 provides for the inspection of stock at stock yards and abattoirs by government inspectors and for the regulation of transactions of butchers and hide dealers, with inspection fees. C. 69 amends the Domestic Animals Act regarding stray animals in municipalities and districts. C. 75 amends the Dairymen's Act with respect to discrimination and price-fixing in transactions involving milk and cream.

Assessment.—C. 14 provides for the adjustment of inequalities in assessments, the Assessment Equalization Board being given power to enquire into such inequalities and to alter or confirm the assessment.

Buying and Selling.—C. 47, the Bulk Sales Act, establishes uniform provisions for the sale of goods in bulk with respect to persons affected and the nature and terms of sales. C. 48, respecting fraudulent or preferential transfers, sets out regulations controlling the procedure of debtors and creditors in case of insolvencies. C. 50 amends the Bills of Sale Ordinance and c. 51 the Alberta Co-operative Credit Act.

Companies.—C. 34 amends the Corporations Taxation Act, providing changes in the taxes payable by corporations in the province, particularly those payable by express companies.

Education.—C. 24 amends the Educational Tax Act and c. 62 the School Ordinance, principally with respect to fees paid by pupils. C. 63 amends the School Grants Act and c. 64 the School Assessment Ordinance regarding school taxes on land and the collection of taxes for the maintenance of schools.

Finance.—C. 1 authorizes the expenditure of $1,202,532 to defray expenses of government from Jan. 1 to Dec. 31, 1921, of $27,548,587 for the fiscal year 1922, and of $6,986,730 for the fiscal year 1923. C. 2 authorizes the raising of a loan of $7,800,000 on the credit of the province. A further loan of $3,000,000 is authorized by c. 3, one third of which funds are to be for the extension of the provincial telephone system.

Forestry.—C. 76 amends the Prairie Fires Ordinance, setting out regulations regarding fire guardians and their duties, with provisions for procedure in case of prairie and forest fires.

Game.—C. 73 amends the Game Act regarding licenses for big game, traffic in furs and pelts, trappers' licenses and exemptions granted in certain districts.

Highways.—C. 79 provides for a system of highways in the province, including the appointment of a Highway Commissioner and a Good Roads Board, the classification of roads throughout the province and miscellaneous provisions regarding highway building and maintenance.

Labour, Health and Social Legislation.—C. 5 amends the Liquor Act, chiefly with respect to penalties for violation of the provisions of the Act, the appointment of a Liquor Act Inspector and the powers of the Governor in Council in regulating the sale of liquor. C. 6 sets out regulations to govern the storing and export of liquor and the taxation of such business. C. 7 authorizes the licensing and regulation of restaurants. C. 30 and c. 31 amend the Municipal Hospitals Acts, the latter with regard especially to the raising of funds and methods of their disposal, while c. 32 treats with the care of indigents in hospitals. C. 45 amends the Official Guardian Act regarding appointment and powers. C. 56 amends the Medical Profession Act, setting out qualifications for membership in the Council, its duties and powers and provisions for the licensing of chiropractors.

Miscellaneous.—C. 4 amends various Acts of the Statute Law. C. 11 establishes the Superannuation Board to administer provisions for the superannuation and retiring allowance of civil servants. C. 43 enacts provisions for the relief of persons in drought areas of the province.

Motor Vehicles.—In c. 37, the Act respecting Motor Vehicles is amended with respect to licensing, equipment and punishable offences.

Municipalities.—C. 15 amends the Municipal District Act regarding qualifications of electors and c. 16, regarding the formation of municipal districts, elections, insect pests, hospitals and taxes. C. 21 amends the Town Act with respect to the preparation of financial statements, elections, taxation and hospital management. Very similar amendments are made to the Village Act in c. 22 and to the Improvement District Act in c. 26. C. 65 and c. 66 provide for advances by municipalities to farmers for the purchase of seed grain and feed. C. 82 and c. 84 amend the Act respecting Irrigation Districts and c. 85 the Drainage Districts Act.

Public Utilities.—C. 39 provides for a loan of $514,456 to the Alberta and Great Waterways Railway Co., c. 40 for a loan of $475,500 to the Central Canada Railway, c. 41 for a loan of $410,000 to the Edmonton, Dunvegan and British Columbia Railway and c. 42 for a similar loan of $265,000 to the Lacombe and North Western Railway.

Taxation.—C. 25, an Act to provide for the Recovery of Taxes, has regard to the scope of the Act, duties of municipal authorities, caveats, sales, redemption and penalties. C. 27 sets out provisions regarding tax sales of city property. C. 36 imposes a tax of 2 cents per gallon on gasoline when first sold in the province. C. 44 amends the Amusements Tax Act and c. 53 provides for the relief of owners of lands sold at tax sales.

British Columbia.

Administration of Justice.—C. 16 amends the Supreme Court Act regarding non-payment of judgment debts, c. 17 the County Courts Act regarding intestate estates, c. 18 the Inferior Courts Practitioners Act with respect to its application in various municipalities, c. 24 the Execution Act regarding registration of judgments and c. 38 the Jury Act regarding personnel of juries and their selection.

Agriculture.—C. 10 provides for the expenditure of sums up to $20,000 to prevent injury to fruit lands through the spread of the codling-moth. Such expenditure is to be under the direction of the Minister of Agriculture. Fruit lands may be assessed and taxed to repay the sums so advanced.

Assessment.—C. 21 amends the Dyking Assessment Adjustment Act regarding the assessment of lands, forfeiture in case of non-payment of taxes, redemptions and sales.

Buying and Selling.—C. 13 sets out provisions regarding conditional sales, as regards rights and liabilities of parties to such sales, redemptions and re-sales, memoranda of satisfaction, assignments, etc.

Child Welfare.—C. 31, amending the Infants Act, deals principally with ages of children, receipt of moneys by Children's Aid Societies and offences by children against the laws of the province.

Companies.—C. 11 amends the Companies Act regarding promotion, incorporation, share and debenture issues and licensing of extra-provincial companies. C. 12 amends the Trust Companies Act regarding registration and licensing and c. 15 amends the Co-operative Associations Act chiefly regarding the distribution of profits and the enforcement of contracts.

Education.—C. 64 amends and consolidates the Public Schools Act, establishing a Department of Education in charge of a Minister, setting out the functions of the Department and of the Council of Public Instruction. The classification of school districts and the general system of school government are established, while detailed provisions are enacted regarding the election and duties of trustees, appointment of inspectors and teachers, provincial aid to schools and the internal management of schools with respect to both teachers and pupils.

Elections.—C. 22 amends the Municipal Elections Act regarding the definitions of the term " householder " and expenses incurred in the re-counting of votes.

Finance.—C. 45 provides for the borrowing of $3,500,000 to provide chiefly for the purchase of land and buildings for the public service of the province. C. 62 amends the Revenue Act, authorizing the borrowing of moneys for the repayment of provincial securities and the substitution of one class of security for another when deemed expedient. C. 74 authorizes the expenditure of $46,714 for the fiscal year ending March 31, 1922, a supplementary sum of $301,725 for the fiscal year 1923 and $20,097,300 for the year 1924.

Forestry.—C. 41 amends the Forest Act. Provisions are set out with respect to the granting of free-use permits for timber cutting, the prevention of forest fires and their control.

Insurance.—C. 32 provides for the annual licensing of provincial fire insurance companies and of underwriter's agencies, while c. 34 and c. 35 establish uniform regulations governing conditions in policies of accident and sickness and automobile insurance.

Labour, Health and Social Legislation.—C. 6 amends the Better Housing Act, ratifying and validating over-expenditures by municipalities under the Act. C. 9 provides for the maintenance of children of unmarried parents. C. 25 provides

for the application of the Factories Act to all laundry establishments. C. 45 amends the Government Liquor Act regarding licenses and fees, restriction of sale, penalties and disposal of profits. C. 48 permits the practice of chiropractic in the province. C. 57 provides for the maintenance of parents by their children, c. 60 for the establishment of a "Provincial Home for Incurables" and c. 86 amends the Workmen's Compensation Act regarding payments by employers, procedure in cases of default and the jurisdiction of the Board.

Mining.—C. 36, the Iron-ore Deposits Examination Agreement Ratification Act, sets out the powers of the Minister of Mines relating to the entry and occupation of lands, mines, mineral claims and mining property and the carrying out of trenching, drilling, etc. The expenditure of $50,000 is authorized under the Act.

Miscellaneous.—C. 5 treats of the assignment of book accounts, their registration, mortgaging and re-assignment. C. 7 sets out regulations *re* boiler inspection, principally the duties of inspectors. C. 59 regulates the publication and distribution of all official documents by the King's Printer. C. 70 provides for special surveys by order of the Attorney-General, the defraying of costs incurred, and reports. C. 82, the Warehouses Lien Act, has regard to notices of sales, their contents and advertisement and the disposition of proceeds.

Municipalities.—C. 51 amends the Municipal Act mainly with respect to assessment and the purchase of lands by municipalities, while c. 52 amends the Village Municipalities Act.

Public Utilities.—C. 8 provides for the regulation of rates chargeable by the British Columbia Electric Railway, by commissioners appointed by the Lieutenant-Governor. C. 23 authorizes the appointment of inspectors of electric equipment and c. 28 incorporates the Greater Victoria Water District.

Taxation.—C. 75, the Taxation Act, sets out, in its sixteen sections, detailed provisions for assessment and taxation in the province.

III.—PRINCIPAL EVENTS OF THE YEARS 1922 AND 1923.

General Economic Conference.—A General Economic Conference was held in Genoa from April 10 to May 20, 1922, with Premier Facta of Italy as chairman. Canada was represented by Sir Chas. B. Gordon.

Sir R. S. Horne, chairman of the sub-committee on finance, outlined the great goal of the conference as: first, to establish an agreement on the financial programmes of all governments; secondly, to achieve the financial equilibrium of the budgets of all states; and, thirdly, the establishment of the gold standard as an effective monetary unit. The real interest of the conference, however, centred in the question of the relations with Russia. France insisted on the full payment of Russia's war debts and the restoration of private property to foreigners; Great Britain favoured a reduction in Russia's war debt and the granting to former foreign owners the use of their property, instead of a return of actual ownership.

After prolonged discussions of the payments to be made by Russia, no settlement was reached and the question was referred to the Hague Conference in June, 1922, for settlement.

Conference at Washington re Perpetuation of the Rush-Bagot Treaty.—The Rt. Hon. W. L. Mackenzie King, Prime Minister of Canada, and the Hon. G. P. Graham, Minister of National Defence, represented Canada at a conference held in Washington on July 13, 1922, *re* the perpetuating of the Rush-Bagot Treaty, a pact which has operated to limit naval armament on the Great Lakes during the

past 105 years. The need for a revision grew out of changing conditions on the Great Lakes. The Canadian Government had had to deal with a number of applications for the passage through the Canadian canals of armed vessels used for the training of naval militia on the lakes. Further, United States shipbuilders on the Great Lakes wished to be allowed to compete for the construction of war vessels for the United States Navy. The time was suitable, too, as the disarmament conference at Washington in 1921 had created a favourable atmosphere. It was also felt that if the situation was allowed to develop further, the demand was sure to arise for the presence of Canadian armed vessels on our own side of the Great Lakes.

The Prime Minister, on his return to Canada, stated that the outlook was good for putting the agreement regarding disarmament on the Great Lakes on a permanent basis.

Signing of Trade Agreement between Canada and France.—A trade Agreement was signed by representatives of the French and Canadian Governments in Paris on Sept. 15, 1922. The signatories to the agreement were Lord Hardinge, the British Ambassador to France, Hon. (now Right Hon.) W. S. Fielding, Canadian Minister of Finance, and Hon. Ernest Lapointe, Canadian Minister of Marine and Fisheries, on behalf of Canada, and M. Dior, French Minister of Commerce, for France.

The new treaty replaced the pre-war arrangement between France and Canada, and placed France on the most favoured nation basis with Canada. French exports are now admitted to Canada on the intermediate tariff, which is the most favourable given to foreign countries, and affords France a better outlet for her wines, automobiles, laces, feathers and other *de luxe* merchandise. Canadian exports to France are admitted on a better basis than formerly. One hundred and twenty-eight Canadian articles are accorded the French minimum tariff, while 326 are given the intermediate tariff. These intermediate tariff articles are allowed to enter France on the same basis as exports from the United States under the Franco-American agreement of 1921.

Third Assembly of the League of Nations.—The third assembly of the League of Nations was opened on Sept. 4, 1922, 45 out of the 51 nations in the League being represented. Hon. (now Right Hon.) W. S. Fielding, Minister of Finance, was chairman of the Canadian delegation. The chief subjects dealt with by the assembly were those of disarmament and the critical situation of Austria due to the currency inflation in that country. Aid was given to Austria by the League's authorization of a loan of 650,000,000 gold crowns guaranteed by France, England, Italy and Czecho-Slovakia. Canada's contribution to the League budget for 1923 was reduced from $200,000 to $150,000.

Fourth Assembly of the League of Nations.—The fourth session of the League of Nations was held at Geneva from Sept. 3 to Oct. 1, 1923, with Dr. Cosme de la Torriente as president. Many important world problems were brought before the League, including the Janina murders in Epirus, which had caused a crisis between Italy and Greece. Ireland was admitted to membership as a British Dominion on September 10.

At the close of the session, the president, reviewing the work of the meeting, praised the skill and wisdom displayed by the Council in the Græco-Italian dispute. Everybody, he said, was anxious and uneasy, fearing a widespread war, and, when the difficulty was settled with the close collaboration of the Council of the League, the whole world experienced a sensation of relief and satisfaction.

Imperial Conference.—An Imperial Conference was held in London from October 1 to November 9, 1923, with Mr. Stanley Baldwin, Prime Minister of Great Britain, as chairman. Canada was represented by the Right Hon. W. L. Mackenzie King, Prime Minister of Canada, Hon. Geo. P. Graham, Minister of Railways and Canals, and Sir Lomer Gouin, Minister of Justice.

Many matters of importance to Great Britain and her Dominions were discussed and dealt with by the conference. Chief among these were the defence of the Empire and preferential tariff treatment by Great Britain of her Dominions. As seen from the Canadian point of view, the results of the conference are summed up by a member of the Canadian delegation as follows:

1. A much clearer understanding of the Canadian position as to Imperial relations.
2. Recognition of equality and independent initiative in matters peculiar to one part of the Empire, coupled with willingness to co-operate in matters of common concern.
3. The clearing up of the present position of the Dominions in respect to making treaties, with the unanimous understanding reached along the lines adopted by the Canadian Government from the Treaty of Versailles to the Halibut Fisheries Treaty.
4. Recognition by the Admiralty for the first time of the principle of Dominion navies.
5. Emphasis on the responsibility of each part of the Empire for its own defence.
6. Recognition that it is for the Parliament and people of each part of the Empire to decide on the measure of its own defence preparations.

Provincial General Elections.—In Quebec, at a general election held on Feb. 5, 1923, the Liberal party, under the leadership of Premier Taschereau, was given a renewed lease of power, with a total of 63 out of the 85 seats in the House. Conservative candidates were returned in 21 constituencies and one Labour member was elected.

In Ontario, at a general election which took place on June 25, 1923, the Drury government was defeated, the Conservative party having a majority of 39 seats over all the other parties. Their leader, the Hon. G. Howard Ferguson, took office as Premier on July 16.

In Prince Edward Island, at a general election held on July 26, 1923, the Liberal government of the Hon. John H. Bell was defeated, the Conservative party, led by J. D. Stewart, K.C., securing 26 of the 30 seats contested.

The Economic and Financial Years 1922 and 1923.—The severe depression which continued throughout 1921 had been mainly attributable to the great and sudden decline of prices from the peak of May 1920, and to the uncertainty thus created in the mind of the producer as to whether his product would be taken off his hands at a remunerative price.

During the years 1922 and 1923 the wholesale prices of commodities remained comparatively stationary, the latter year even showing a slight advance. When once the business public commenced to realize that the great slump was over and that a comparatively steady level of prices had been reached, confidence in the future began to revive, and manufacturers and other business entrepreneurs commenced once more to produce for a future market. As a result, employment gradually improved from the low point of Jan. 1, 1922, when some 4,000 large manufacturing firms employed only 68.7 p.c. of the hands whom they had em-

ployed in January of 1920, at the height of the boom. Through 1922, the percentage gradually increased to a maximum of 87.7 p.c. in November and December, while in 1923, it reached 93.6 p.c. in July. Mining, transportation and construction and maintenance have also shown increased employment in 1922 and 1923, as compared with 1921, so that on the whole it may be said that the country has, during 1922 and 1923, recovered from the profound depression of 1921. Certain serious conditions, however, are still to be overcome.

The gravest feature in the situation at the close of 1923 is the inequality of the deflation in the prices of the primary products of the farm and in those of manufactured goods. Whereas the average prices of field crops in 1922 were only about 17 p.c. higher than in 1913 (see diagram on page 293), the prices of the commodities which the farmer bought were not less than 50 p.c. higher than in 1913. This situation, which also exists in the United States and the United Kingdom, has produced a general agricultural depression in all three countries, and has led to a considerable amount of unrest. The disproportion between the world prices of agricultural products and of manufactured products has, however, been harder upon Canada, since agriculture is relatively a more important industry here than in either the United States or the United Kingdom.

In spite of the depressed situation in her leading articles of export, Canada has in the past year or two maintained her position as one of the greatest exporting nations of the world. In the calendar year 1922, Canada, with exports amounting to $884,363,000, stood fifth among the exporting nations of the world, surpassed only by the four great industrial countries, the United States, the United Kingdom, France and Germany. In the twelve months ended December, 1923, Canadian exports of domestic products were $1,014,734,274, considerably exceeding the $944,859,000 which was the gold value of Germany's exports of domestic produce in 1922.

Statistics of bank clearings have in the recent past been vitiated as a record of transactions by the decline in the number of banks, which has resulted in the elimination from bank clearings of many transactions which formerly figured there. In spite of this handicap, the total of all Canadian bank clearings was $17,317,227,574 in 1923, as compared with $16,264,816,442 in 1922.

The most recent statistics available at the end of 1923—the increase in immigration for the first eight months of the fiscal year from 56,882 to 118,091—the enormous, if low-priced agricultural production of 1923—the increase of mineral production from $171,923,000 in 1921 and $184,297,000 in 1922 to an estimated $214,102,000 in 1923—the expansion of our external trade—the increase in Dominion revenue, coupled with the improved showing of the Canadian National Railways—all lead to the conclusion that Canada commences 1924 with better prospects than in any previous year since before the war. It is to be hoped that the improvement of the European situation may permit of that continent becoming once more a profitable customer for our surplus of food products and raw materials, thus restoring the balance between the prices of our agricultural and our manufactured products.

Obituary.—1922. Dec. 28, John A. Chesley, Montreal, Que., formerly a member of the House of Commons and Canadian Trade Commissioner in South Africa from 1907 to 1913. **1923.** Jan. 8, E. D. Sutherland, I.S.O., Auditor General. Jan. 10, John A. McDougald, Cornwall, Ont., Local Registrar of the Supreme Court of Ontario, Registrar of the Surrogate Court and Clerk of the County Court for the United Counties of Stormont, Dundas and Glengarry. Jan. 17. Hon.

William C. Kennedy, Minister of Railways and Canals. February 18. Col. Gustave A. Taschereau, Ottawa, Assistant Director of Equipment and Ordnance Services in Department of National Defence. February 20, Sir Thomas George Roddick, M.D., LL.D., Montreal, Que., a member of the Medical Council of Canada. March 1. Sir Walter Gibson Pringle Cassels, B.A., Kt., Ottawa, President and Chief Justice of the Exchequer Court of Canada. March 2. Hon. Joseph Martin, K.C., Vancouver, B.C. March 2. Louis Laframboise, K.C. former chief French translator of the House of Commons. March 5. Reginald A. Fowler, Emerald, Ont., M.P.P. for the constituency of Lennox, Ont. March 6. Arthur St. Laurent, Ottawa, Ont., Chief Engineer Public Works Department. March 12. Judge Joseph Jamieson, former county judge of the county of Wellington, Ont. March 13. Major-General Henry Smith, Department of National Defence. March 17. G. A. Elliott, K.C., Winnipeg, Man. April 1. Hon. John C. Kaine, Quebec, Que., Member of the Legislative Council for Stadacona division and Minister without portfolio in the Taschereau Cabinet. April 2. Hon. Joseph Godbout, Quebec, Que., Senator. April 25. Sir Oliver Taillon, Montreal, Que., Ex-Premier of the Province of Quebec and former Postmaster of Montreal, Que. April 27. Brig.-General James H. Mitchell, D.S.O., Toronto, Ont. May 14. Rev. Dr. James A. MacDonald, Toronto, Ont., former Editor of the Toronto Globe. May 18. H. A. Richardson, Toronto, Ont., General Manager of the Bank of Nova Scotia. May 31. Victor Geoffrion, K.C., Montreal, Que., member of Parliament for Chambly and Verchères, from 1900 to 1911. F. J. Bisaillon, K.C., Montreal, Que. Hon. Senator Amédée E. Forget, Banff, Alberta, died in Ottawa. June 9, Rodolphe Boudreau, C.M.G., Ottawa, Ont., Clerk of the Privy Council. June 11. Major-General Sir Matthew Lord Aylmer, Kootenay Lake, B.C., former Inspector-General of the Canadian Forces. Joseph Keele, Ottawa, Ont., Geologist, Department of Mines. Christopher B. Robinson, Ottawa, Ont. July 8. Hon. William H. Thorne, St John, N.B., Senator. July 13. Hon. Dr. Thomas H. McGuire, first Chief Justice of the Supreme Court of the Northwest Territories. July 17. Lieut. Col. Sir John S. Hendrie, K.C.M.G., C.V.O., Hamilton, Ont., former Lieutenant-Governor of the Province of Ontario. July 23. James Findley, Pembroke, Ont., ex-M.P. North Renfrew, Ont. July 24. Dr. John G. Rutherford, C.M.G., V.S., Ottawa, Ont., member, Board of Railway Commissioners for Canada. July 26. Thomas J. Code, Ottawa, Ont., Assistant to the Deputy Minister and Chief Accountant, Department of Trade and Commerce. Aug. 15. John Laxton, a member of the Toronto Board of Harbour Commissioners. Aug. 17. Sir Alexandre Lacoste, Kt., Montreal, Que. Aug. 21. Hon. Sir William Ralph Meredith, Kt., Toronto, Ont., Chief Justice of the Supreme Court of Ontario. Oct. 2. Lieut.-Col. Francis Gourdeau, former Deputy Minister of Marine and Fisheries. Oct. 28. Auguste T. Leger, M.P. for Kent County, N.B. Nov. 6. John Castell Hopkins, F.S.S., F.R.G.S., publisher of the Canadian Annual Review. Nov. 23. Charles A. Bigger, C.E., D.L.S., Assistant Superintendent of the Geodetic Survey of Canada, Ottawa, Ont. Nov. 19. William John Gerald, I.S.O., Ottawa, Ont., former Deputy Minister of Inland Revenue. Dec. 5. Sir William Mackenzie, railway builder and contractor, Toronto, Ont. Dec. 10. The Right Hon. Baron Shaughnessy, Knight Commander of the Royal Victorian Order, First Baron Shaughnessy of Montreal and of Ashford, County Limerick, Ireland, and chairman of the board of directors of the Canadian Pacific Railway. Dec. 28th. Dr Otto J. Klotz, Director of the Dominion Observatory, Ottawa.

IV.—EXTRACTS FROM THE CANADA GAZETTE.[1]

Privy Councillors.—1923. Sept. 12. Edward J. McMurray, M.P., Winnipeg, Man.

Lieutenant-Governors.—1923. Feb. 15. William F. Todd, St. Stephen, N.B., to be from Feb. 24, 1923, Lieutenant-Governor of the said province of New Brunswick, in the room and stead of the Hon. William Pugsley. Oct. 12. Hon. Louis P. Brodeur, P.C., formerly one of the Justices of the Supreme Court of Canada, to be from Oct. 31, 1923, Lieutenant-Governor in and over the Province of Quebec, in the room and stead of the Rt. Hon. Sir Charles Fitzpatrick, G.C.M.G.

New Members of the House of Commons.—(Date when gazetted).—**1922.** Nov. 24. Eusèbe Roberge, Electoral District of Megantic, Que.; Joseph T. Rhéaume, Electoral District of Jacques Cartier, Que., and John G. Robichaud, Electoral District of Gloucester, N.B. Dec. 19. Richard F. Preston, Electoral District of Lanark, Ont. Dec. 26. Robert E. Finn, Electoral District of Halifax, N.S. **1923.** March 14. Albert Francis Healy, Electoral District of Essex North, Ont. May 3. Edward Nicholas Hopkins, District of Moose Jaw, Saskatchewan. May 16. Joseph F. Descoteaux, Electoral District of Nicolet, Que. Aug. 20. Fenwick L. Kelly, Electoral District of Cape Breton North and Victoria, N.S. Nov. 5. Edward James McMurray, Electoral District of Winnipeg North, Manitoba.

Cabinet Ministers.—1923. April 28. The Hon. George P. Graham, a member of the King's Privy Council for Canada, to be Minister of Railways and Canals. The Hon. Edward M. Macdonald, a member of the King's Privy Council for Canada, to be Acting Minister of National Defence. Aug. 17. The Hon. Edward M. Macdonald, Pictou, N.S., a member of the King's Privy Council for Canada, to be Minister of National Defence. The Hon. James A. Robb, Ottawa, Ont., a member of the King's Privy Council for Canada, to be Minister of Immigration and Colonization. The Hon. Thomas A. Low, Renfrew, Ont., a Member of the King's Privy Council for Canada, to be Minister of Trade and Commerce. Sept. 12. The Hon. Edward J. McMurray, M.P., Winnipeg, Man., a member of the King's Privy Council for Canada, to be Solicitor-General of Canada.

Judicial Appointments.—1922. Dec. 22. The Hon. Pierre E. Lafontaine, one of the Judges of the Superior Court in and for the Province of Quebec, to be the Chief Justice of the Court of King's Bench in and for the Province of Quebec, and Charles A. Wilson, Montreal, Que., one of His Majesty's Counsel learned in the law for the said province, to be a Puisne Judge of the Superior Court in and for the Province of Quebec. **1923.** Jan. 15. Gonzalve Desaulniers, Montreal, Que., one of His Majesty's Counsel learned in the law for the said province, to be a Puisne Judge of the Superior Court in and for the Province of Quebec. Mar. 29. Jean B. T. Caron, Ottawa, Ont., Barrister-at-law, to be the Judge of the District Court of the Provisional Judicial District of Cochrane, Ont. His Honour Jean B. T. Caron, Judge of the District of Cochrane, Ont., to be a local Judge of the High Court Division of the Supreme Court of Ontario. Walter Thompson Evans, Hamilton, Ont., one of His Majesty's Counsel learned in the law for the said province, to be the Judge of the County Court of the County of Wentworth, Ont. His Honour Walter Thompson Evans, Judge of the County Court of Wentworth, Ont., to be a Local Judge of the High Court Division of the Supreme Court of Ontario. April 11. The Hon. Daniel Duncan McKenzie, Ottawa, a member of the King's Privy Council

[1] Appointments up to Nov. 20, 1922, will be found on pp. 881–885 of the 1921 edition of the Year Book.

for Canada, to be a Puisne Judge of the Supreme Court of Nova Scotia. April 14. Walter Harley Trueman, Winnipeg, Man., one of His Majesty's Counsel learned in the law for the said province, to be a Judge of the Court of Appeal for Manitoba and *ex-officio* a Judge of the Court of King's Bench for Manitoba. April 25. Arthur Trahan, Nicolet, Que., one of His Majesty's Counsel learned in the law for the said province, to be a Puisne Judge of the Supreme Court in and for the said Province of Quebec. June 4. John A. Barry, St. John, N.B., Barrister-at-law, to be Judge of the County Court for the City and County of St. John, in the said province, such appointment to take effect from the 15th June, 1923. June 19. Louis A. Rivet, Montreal, Que., one of His Majesty's Counsel learned in the law for the said province, to be a stipendiary Magistrate for the Northwest Territories. July 10. The Hon. Sir William Mulock, K.C.M.G., Chief Justice of the Exchequer of the Supreme Court of Ontario, to be the Chief Justice of the Second Divisional Court of the Supreme Court of Ontario and to be *ex-officio* a Judge of the High Court Division of the said Supreme Court of Ontario. The Hon. Francis R. Latchford, The Hon. William Middleton, The Hon. Cornelius A. Masten and The Hon. Robert Smith, Judges of the Supreme Court of Ontario, to be Justices of Appeal of the Second Divisional Court of the Supreme Court of Ontario, and to be *ex-officio* Judges of the High Court Division of the said Supreme Court of Ontario. Aug. 14. Martin J. Kenny, Port Arthur, Ont., Barrister-at-law, to be the Senior Judge of the District Court of the Provisional Judicial District of Thunder Bay, Ont. His Honour Martin J. Kenny, the Senior Judge of the District Court of the Provisional Judicial District of Thunder Bay, Ont., to be a Local Judge of the High Court Division of the Supreme Court of Ontario. Aug. 31. Hon. Sir William Mulock, K.C.M.G., Toronto, Ont., Chief Justice of the Second Divisional Court of the Supreme Court of Ontario, to be the Chief Justice of the First Divisional Court of the Supreme Court of Ontario with the style and title of Chief Justice of Ontario, and to be *ex-officio* a Judge of the High Court Division of the said Supreme Court of Ontario. Hon. Francis R. Latchford, a Justice of Appeal of the Second Divisional Court of the Supreme Court of Ontario, to be the Chief Justice of the said Second Divisional Court of the Supreme Court of Ontario, and to be *ex-officio* a Judge of the High Court Division of the Supreme Court of Ontario. Hon. John F. Orde, a Judge of the Supreme Court of Ontario, to be a Justice of Appeal of the Second Divisional Court of the Supreme Court of Ontario, and to be *ex-officio* a Judge of the High Court Division of the said Supreme Court of Ontario. William H. Wright, Owen Sound, Ont., of Osgoode Hall, Barrister-at-law, to be a Judge of the Supreme Court of Ontario and a member of the High Court Division of the said Court and to be *ex-officio* a member of the Appellate Division of the said Court. Nov 2. Hon. Alexander K. Maclean, P.C., Halifax, N.S., one of His Majesty's Counsel learned in the law for the said province, to be the President of the Exchequer Court of Canada.

Commissions.—1922. Dec. 22. Louis Robichaud, Richibucto, N.B., Barrister-at-law, to be a Commissioner to investigate into and report as to whether the dismissal of Albert M. Goguen from the position of Fishery Guardian on the ground of inefficiency was justified and whether Wilfred Bourgeois had efficiently discharged his duties in a similar position and whether either of the above-named fishery guardians was guilty of political partizanship. **1923.** Jan. 5. Pierre Dupuy, Paris, France, Secretary to Philippe Roy, Commissioner-General of Canada in France, to be a Commissioner to administer oaths and to take and receive affidavits, declarations and affirmations in France, in or concerning any proceedings

had or to be had in the Supreme Court of Canada and in the Exchequer Court of Canada, and to administer, take and receive such other oaths, affidavits, declarations and affirmations as by law of the Dominion of Canada may be made. Jan. 17. Simon James McLean, Ottawa, Ont., Assistant Chief Commissioner, Board of Railway Commissioners; Levi Thompson, Qu'Appelle, Saskatchewan, Barrister-at-law, and Brigadier-General Thomas L. Tremblay, C.M.G., D.S.O., Quebec, Que., to be Commissioners to investigate into the representations made to His Excellency's Government as set forth in an Order in Council of Jan. 17, 1923, inquiring into the relations and arrangements between the steamship companies and interests amalgamated or combining for the purpose of operating or arranging for the transportation and insurance of grain upon vessels traversing lakes Superior, Huron and Erie; into the alleged combine of shipping interests in efforts to dominate and control the freight rates and terms under which grain has been carried from the harbours of Fort William and Port Arthur in the Province of Ontario; into the comparative freight rates on grain by vessels traversing the Great Lakes between Duluth, Milwaukee and Chicago to Eastern Lake Ports, as compared with prevailing freight rates on grain to Eastern Lake Ports in vessels controlled or dominated or fixed by the alleged combination of interests controlling Canadian lake shipping, sailing from Port Arthur and Fort William to eastern ports, and to make such other further inquiry and investigations as to the said Commissioners may seem necessary in the premises, the said Simon J. McLean to be chairman of the said Commission. Jan. 26. Thomas R. Mayberry, Ingersoll, Ont., to be a Commissioner to investigate into and report upon charges of political partizanship against government employees in the Province of Ontario. Jan. 30. Lucien Pacaud, Joint Secretary of the Office of the High Commissioner in London, in the United Kingdom, to be a Commissioner to administer oaths and to take and receive affidavits, declarations and affirmations in the United Kingdom, in or concerning any proceedings had or to be had in the Supreme Court of Canada and in the Exchequer Court of Canada and to administer, take and receive such other oaths, affidavits, declarations and affirmations as by law of the Dominion of Canada may be made. Feb. 26. Joseph Wilfrid Ste. Marie, Hull, Que., Advocate, to be a Commissioner to investigate into and report upon charges of political partizanship against government employees in the Electoral District of Wright, Que. March 13. The Hon. William Pugsley, K.C., LL.D., St. John, N.B., to be a Commissioner to investigate into and report upon the claims filed in the Department of the Secretary of State pursuant to advertisements therefor, namely:—(*a*) Claims of persons residing or carrying on business in Canada who have been subjected to loss and pecuniary damages arising through the destruction of life and property through the illegal warfare of the enemy, and (*b*) claims for damages to which persons residing or carrying on business in Canada have been subjected for breaches of contracts, which contracts were prevented from being carried out owing to the operation of the statutory list of persons in neutral countries with whom such contracts were declared illegal for the purpose of determining whether they are within the categories set forth in Annex I of Part VIII (Reparation), Section I of the Treaty of Peace between the Allied and Associated Powers and Germany, signed at Versailles June 28, 1919, and the fair amounts of such claims, and to make such findings as may be of assistance to the Government of Canada in determining which, if any, of such claims be paid and the extent of payment thereof, and for the purpose of considering and recommending to the Custodian of Enemy Property releases where the parties are necessitous, suffering and in hardship. March 20. Andrew T. Thompson, B.A.,

LL.B., Ottawa, Ont., one of His Majesty's Counsel learned in the law for the said province, to be a Commissioner to investigate into and report upon the affairs of the Six Nation Indians, including matters relating to education, health, morality, election of chiefs, powers assumed by Council, administration of justice, soldiers' settlement and any other matters affecting the management, life and progress of the said Indians, as may be required by the Superintendent-General of Indian Affairs. April 21. Frederick T. Congdon, Ottawa, Ont., one of His Majesty's Counsel learned in the law, to be a Commissioner to enquire into and report upon the circumstances incidental to or connected with any payment made or authorized by the Grand Trunk Railway Company of Canada (now the Canadian National Railway Company) or its shareholders, directors or officers, or by the shareholders, directors or officers of any subsidiary company to any officer or any directors of any such company by way of bonus, gratuity, retiring allowance or otherwise, or any payment made or authorized by any such company or its shareholders, directors or officers incidental to or concurrently with the appointment of a receiver of the Grand Trunk Pacific Railway Company or the negotiations for or the acquisition of the capital stock of the said Grand Trunk Railway Company of Canada. April 20. Charles C. Mayer, Ottawa, Ont., to be a Commissioner to administer oaths and to take and receive affidavits, declarations and affirmations in Canada in or concerning any proceedings had or to be had in the Supreme Court and in the Exchequer Court of Canada. May 1. The Hon. William F. A. Turgeon, Judge of the Court of Appeal for Saskatchewan, Professor William J. Rutherford, B.S.A., Saskatoon, Sask., Dean of the Faculty of Agriculture, University of Saskatchewan, Duncan A. McGibbon, Ph.D., Edmonton, Alberta, Professor of Economics, University of Alberta, and James G. Scott, Quebec, Que., to be Commissioners to inquire into and report upon the subject of handling and marketing of grain in Canada and other questions incident to the buying, selling and transportation of grain; and in particular, but without restricting the generality of the foregoing terms, upon the following matters: (1) the grading and weighing of grain, (2) the handling of grain in and out by country elevators and from country points, (3) the operation of terminal, public and private elevators, (4) the mixing of grain, and (5) the disposition of screenings; the said Hon. William F. A. Turgeon to be chairman of the said Commission. May 18. Major Frederick H. Honeywell, Ottawa, Ont., Barrister-at-law, to be a Commissioner to enquire into and report upon all circumstances incidental to or connected with any payment made or authorized by the Grand Trunk Railway Co. of Canada (now the Canadian National Railway Co.) or its shareholders, directors or officers or by the shareholders, directors or officers of any subsidiary company to any officer or any director of any such company by way of bonus, gratuity, retiring allowance or otherwise, or any payment made or authorized by any such company or by its shareholders, directors or officers incidental to or concurrently with appointments of a receiver of the Grand Trunk Pacific Railway Co. or the negotiations for the acquisition of the capital stock of the said Grand Trunk Railway Company of Canada. June 26. Clovis T. Richard, Bathurst, N.B., Barrister-at-law, to be a Commissioner to investigate into and report on charges of political partizanship against government employees in the Province of New Brunswick. July 10. Robert F. Grant, Joseph L. Fortin and Norman Labelle, to be members of the Three Rivers Harbour Commission—the first named to be president thereof. Aug. 1. Charles D. La Nause, Inspector, R.C.M. Police Force, to be a Commissioner to investigate into and report in respect of dynamite sticks placed near the road outside the hatchery gate at North East

Margaree, N.S., and in the hatchery yard; also in respect of the interference with the screens in the salmon-rearing pond and the damage and injury to the lanterns at a trap set for catching parent trout for hatchery purposes at that place. Aug. 31. A. S. Williams, Ottawa, Ont., Barrister-at-law and Departmental Solicitor of the Department of Indian Affairs; R. V. Sinclair, Ottawa, Ont., one of His Majesty's Counsel learned in the law, and Uriah McFadden, Sault Ste. Marie, Ont., one of His Majesty's Counsel learned in the law, to be Commissioners to investigate and report upon the validity of a claim made by certain Indians of the Chippewa and Mississauga tribes who have claimed that the said tribes were and are entitled to a certain interest in the lands in the Province of Ontario to which the Indian title has never been extinguished by surrender or otherwise and should the said Commission determine in favour of the validity of the said claim to negotiate a treaty with the said Indians; A. S. Williams to be Chairman of said Commission. Sept. 12. Duncan E. Shaw, Charlottetown, P.E.I., Barrister-at-law, to be a Commissioner to investigate and report upon charges of political partizanship against government employees in the said province. Sept. 22. James W. Robertson, C.M.G., LL.D., Ottawa, Ont., James J. Johnston, Charlottetown, P.E.I., one of His Majesty's Counsel learned in the law for the said province, and Fred. Bancroft, Toronto, Ont., to be Commissioners to enquire into the cause of the industrial unrest among the steel workers at Sydney, N.S., and the circumstances which occasioned the calling out and the retention of the Militia in aid of the civil power in connection with the said unrest, and also into the relations between employers and employees concerned; James W. Robertson to be Chairman of the said Commission. Oct. 2. Bannerman W. Tanton, Summerside, P.E.I., Barrister-at-law, and Stephen R. Burke, Alberton, P.E.I., to be Commissioners to investigate into and report upon charges of political partizanship against government employees in the Province of Prince Edward Island.

Imperial Honours and Decorations.—1923. June 29. To be a Member of His Majesty's Most Honourable Privy Council, The Hon. William S. Fielding.

Day of General Thanksgiving.—Monday, November 12, 1923, was appointed by proclamation as a "day of general thanksgiving to Almighty God for the bountiful harvest and other blessings with which Canada has been favoured this year."

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